Appendix D1

Landover Site Transportation Agreement

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

FBI Headquarters Consolidation Project
Proposed Methods for Modeling Transportation Impacts at Landover Site
(Landover Site Transportation Agreement)

Trip Generation

Table D1-1: Future Site Trip Generation

Source	Independent Variable	Time Period	IN	OUT	TOTAL
JEH Surveys	11,055 employees	**AM Peak Hour**	2,982	224	3,206
		PM Peak Hour	149	2,825	2,974

Trip Generation Rates: 29.0% during AM and 26.90% during PM (maximum of three day survey)
Peak hour entering/exiting percentages: AM – 93% / 7%, PM – 5% / 95%

Trip Distribution

Trip generation rates are shown in the table below and represent a blend between FBI zip code data and MWCOG trip tables.

Table D1-2: Future Site Trip Distribution

Roadways Serving Study Area	Percent Distribution Inbound	Percent Distribution Outbound	AM Peak Hour (vehicle trips)	PM Peak Hour (vehicle trips)
I-95/I-495 NB North of Site	N/A	17.5%	N/A	304
I-95/I-495 SB North of Site	23.0%	N/A	443	N/A
I-95/I-495 South of Site	39.5%	39.5%	761	686
MD 704 NB North of Site	N/A	9.0%	N/A	156
MD 704 SB North of Site	3.5%	N/A	67	N/A
MD 202 West of Site	17.5%	17.5%	337	304
MD 202 East of Site	12.0%	12.0%	231	208
Lottsford Road East of Site	2.5%	2.5%	48	43
Sheriff Road West of Site	2.0%	2.0%	39	35
TOTAL	100.0%	100.0%	1,927	1,737

Study Area

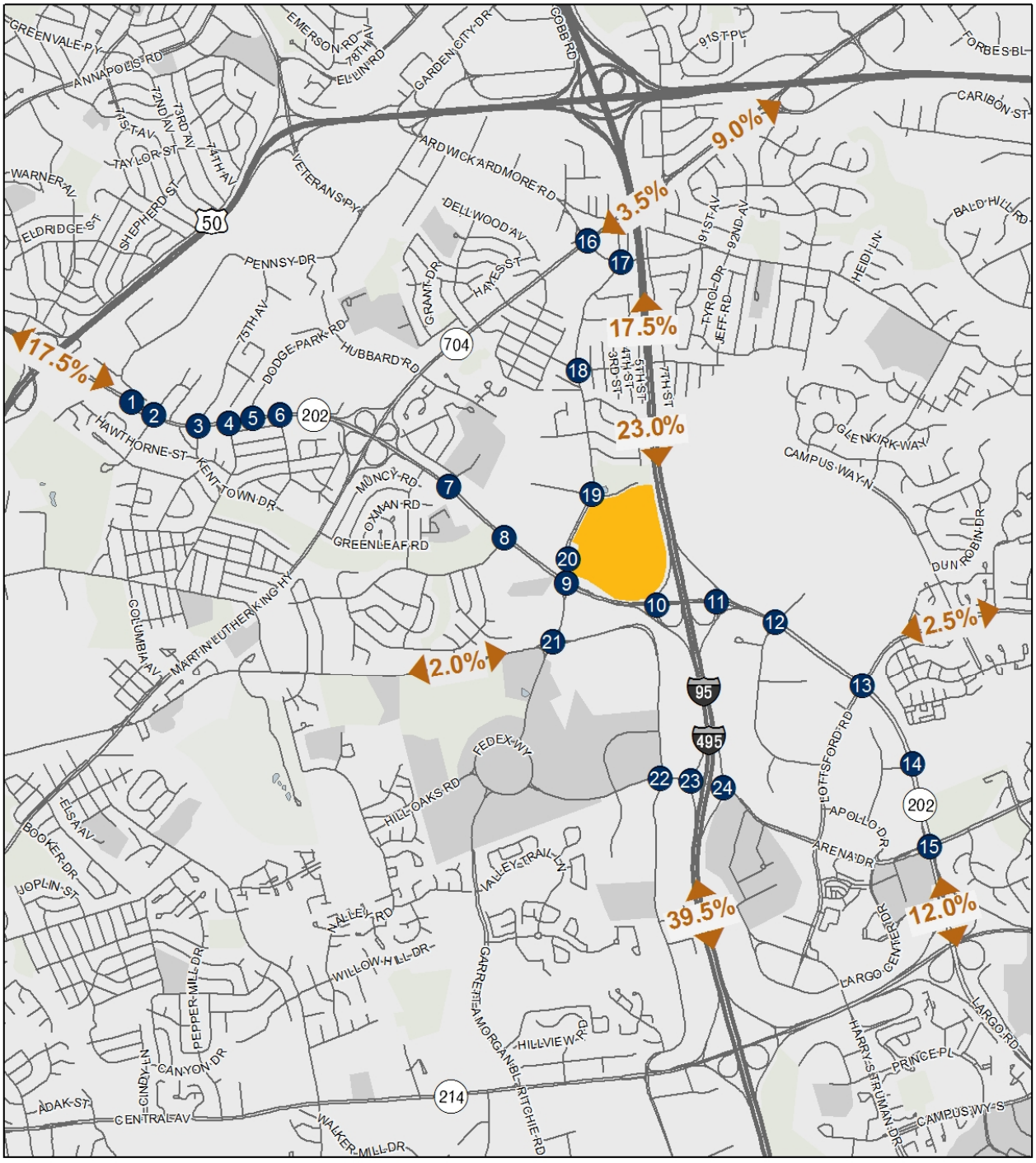
The study area will comprise the 24 intersections as shown in the Figure D1-1.

An analysis of the Merge/Diverge/Weaves along I-95 / I-495 for the existing ramps that would serve proposed FBI vehicle trips would include the following locations:

- I-95 southbound to MD 202 westbound (diverge) – AM only
- I-95 northbound to MD 202 (weave) – AM only

- MD 202 northbound to I-95 southbound (weave) – PM only
- MD 202 eastbound to I-95 northbound (merge) – PM only
- Arena Drive to I-95 southbound (weave) – PM only

Figure D1-1: Study Area Intersections



Proposed Study Intersections and Distributions

Proposed Site

Proposed Study Intersection

0 1,300 2,600 5,200

Feet

1 inch = 2,621 feet

Sources:
ESRI (2013), GSA (2013), DC GIS (2013)

Modal Split

Table D1-3: Modal Split for FBI Consolidation at Landover Site

Mode	FBI Development Percent by Mode	FBI Number of Trips by Mode
Single-Occupancy Vehicles (SOV)	63.3%	7,002
Carpool/ Vanpool *	10%	368 trips (1,105 persons)
Bicycle	1%	111
Walk	1%	111
Commuter Bus	3%	11 trips (332 persons)
Local Bus	3%	332
Metrorail/ Commuter Rail	18.7	2062
Telework/ Compressed Work Schedules	0%	0
TOTAL	**100%**	**11,055**

*Assumes an average of three passengers per carpool.

Analysis Years

- Existing Condition – 2014
- No-build – 2022
- Build – 2022

Analysis Methods

Synchro/SimTraffic – Intersections

Critical Lane Volume - Intersections

Highway Capacity Software – Highway Facilities

- If LOS D or better for Build Condition only, then no further study required.
- If LOS E or F and less than 5 percent increase in vehicle density when compared to No-build, then no further study required.

TransModeler – AM peak hour inbound gate queue analysis

Background Growth

According to MWCOG model comparison between 2010 and 2025 models, there will be an average of 0.56 percent per year growth on I-95, a 0.28 percent per year growth on MD 202, a 1.4 percent per year growth on Arena Drive, and a 2.77 percent per year growth on Brightseat Drive.

According to the historic AADTs maintained by Maryland SHA, MD 202 had a 0.5 percent growth while Arena Drive and Brightseat Road had negative trends.

GSA recommends 0.5 percent per year growth rate for I-95, a 0.33 percent per year growth rate for MD 202 and Brightseat Road, and a 1.0 percent per year growth rate for Arena Drive.

Planned Developments

The following developments will be considered part of the No-build Condition:

- Largo Park (Lots 3 and 4 Block D and Lot 5 Block B)
- Hunters Ridge
- King Property
- Balk Hill Village
- Woodmore Town Center
- Englewood Business Park (Lots 27, 31, 32, 35, 43, 51, and 52)
- Corporate Center (Lot 4)
- Brightseat Road Property

Planned Roadway Improvements

No planned roadway improvements will be considered part of the No-build Condition.

Appendix D2

Traffic Counts

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

Gorove/Slade Associates

Project Name :	LBG-Landover Site
Project # :	2073-013
Location	MD 202/Old Landover Road
Data Source:	SHA

Date of Counts: Wednesday, November12, 2014

Intersection: **Landover Road & Old Landover Road (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Old Landover Road**				**MD 202**								**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	21	0	10	0	30	336	0	0	0	0	0	0	0	139	25	0
6:45 AM	to	7:00 AM	34	0	7	0	44	410	0	0	0	0	0	0	0	189	33	0
7:00 AM	to	7:15 AM	30	0	13	0	39	548	0	0	0	0	0	0	0	165	33	0
7:15 AM	to	7:30 AM	36	0	27	0	46	628	0	1	0	0	0	2	0	238	30	0
7:30 AM	to	7:45 AM	39	0	21	0	53	582	0	0	0	0	0	1	0	305	43	0
7:45 AM	to	8:00 AM	38	0	18	0	44	613	0	1	0	0	0	1	0	345	36	0
8:00 AM	to	8:15 AM	41	0	16	0	59	552	0	1	0	0	0	0	0	336	31	0
8:15 AM	to	8:30 AM	23	0	15	1	43	440	0	1	0	0	0	1	0	322	31	0
8:30 AM	to	8:45 AM	23	0	15	0	28	391	0	1	0	0	0	3	0	348	20	0
8:45 AM	to	9:00 AM	21	0	13	0	24	393	0	0	0	0	0	0	0	313	26	0
9:00 AM	to	9:15 AM	23	0	19	1	25	385	0	0	0	0	0	0	0	297	24	0
9:15 AM	to	9:30 AM	20	0	10	0	28	360	0	2	0	0	0	1	0	271	19	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Old Landover Road**				**MD 202**								**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	21	0	32	0	22	343	0	0	0	0	0	0	0	460	18	0
4:15 PM	to	4:30 PM	19	0	26	0	10	359	0	0	0	0	0	0	0	542	18	0
4:30 PM	to	4:45 PM	29	0	27	0	18	394	0	0	0	0	0	3	0	488	21	0
4:45 PM	to	5:00 PM	25	0	29	0	28	368	0	0	0	0	0	0	0	544	16	0
5:00 PM	to	5:15 PM	33	0	41	0	21	377	0	1	0	0	0	0	0	565	26	0
5:15 PM	to	5:30 PM	22	0	46	0	27	372	0	0	0	0	0	0	0	546	22	0
5:30 PM	to	5:45 PM	28	0	49	0	11	364	0	0	0	0	0	0	0	536	26	0
5:45 PM	to	6:00 PM	32	0	50	0	30	361	0	0	0	0	0	0	0	571	24	0
6:00 PM	to	6:15 PM	26	0	39	0	18	348	0	0	0	0	0	0	0	576	19	0
6:15 PM	to	6:30 PM	30	0	40	0	9	375	0	0	0	0	0	0	0	545	18	0
6:30 PM	to	6:45 PM	14	0	33	0	16	323	0	0	0	0	0	0	0	473	18	0
6:45 PM	to	7:00 PM	19	0	29	0	14	291	0	0	0	0	0	0	0	435	16	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Old Landover Road**				**MD 202**								**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	154	0	82	0	202	2375	0	3	0	0	0	4	0	1224	140	0
PM INTERSECTION PEAK HOUR																		
5:00 PM	to	6:00 PM	115	0	186	0	89	1474	0	1	0	0	0	0	0	2218	98	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	141	0	70	1	199	2187	0	3	0	0	0	3	0	1308	141	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	115	0	186	0	89	1474	0	1	0	0	0	0	0	2218	98	0

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Old Landover Road				**MD 202**								**MD 202**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.86	0.00	0.83	**#DIV/0!**	0.84	0.89	0.00	**0.91**	0.00	0.00	0.00	**#DIV/0!**	0.00	0.95	0.82	**0.95**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.87	0.00	0.93	**#DIV/0!**	0.74	0.98	0.00	**0.98**	0.00	0.00	0.00	**#DIV/0!**	0.00	0.97	0.94	**0.97**

Overall AM PEAK HOUR FACTOR = **0.92** **Overall PM PEAK HOUR FACTOR** = **0.98**

AM Period Intersection Volume: 10253 **PM Period Intersection Volume:** 11761

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & Pinebrook Avenue (Signalized)**

AM PEAK																	
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:					**Landover Road**				**Pinebrook Avenue**				**Landover Road**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM		0	0	0	5	0	444	7	3	8	0	46	2	11	179	0	1
6:45 AM	to	7:00 AM		0	0	0	2	0	500	7	3	11	0	43	3	19	176	0	0
7:00 AM	to	7:15 AM		0	0	0	2	0	637	11	3	9	0	47	0	23	176	0	2
7:15 AM	to	7:30 AM		0	0	0	1	0	601	9	3	9	0	43	2	24	274	0	0
7:30 AM	to	7:45 AM		0	0	0	4	0	666	9	4	10	0	61	5	27	311	0	1
7:45 AM	to	8:00 AM		0	0	0	1	0	664	21	5	12	0	53	4	22	349	1	1
8:00 AM	to	8:15 AM		0	0	0	2	0	552	15	6	12	0	59	2	35	364	0	0
8:15 AM	to	8:30 AM		0	0	0	2	0	458	15	2	6	0	43	2	21	350	0	0
8:30 AM	to	8:45 AM		0	0	0	5	0	452	12	8	10	0	43	5	21	327	1	1
8:45 AM	to	9:00 AM		0	0	0	1	0	418	12	3	7	0	32	3	26	321	1	0
9:00 AM	to	9:15 AM		0	0	0	1	0	351	11	5	10	0	33	1	23	295	1	0
9:15 AM	to	9:30 AM		0	0	0	3	0	329	17	0	5	0	25	0	30	247	1	0
PM PEAK																			
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:					**Landover Road**				**Pinebrook Avenue**				**Landover Road**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM		0	0	0	4	0	296	17	2	15	0	24	0	39	528	1	2
4:15 PM	to	4:30 PM		0	0	0	5	0	338	15	5	13	0	35	1	48	493	0	7
4:30 PM	to	4:45 PM		0	0	0	1	0	342	16	4	17	0	39	2	47	555	1	2
4:45 PM	to	5:00 PM		1	0	0	2	1	367	15	6	12	0	49	2	57	585	1	3
5:00 PM	to	5:15 PM		0	0	0	5	0	337	21	7	12	0	38	7	51	560	0	6
5:15 PM	to	5:30 PM		0	0	0	0	0	376	12	4	15	0	37	0	38	614	0	2
5:30 PM	to	5:45 PM		0	0	0	0	0	329	12	8	21	0	36	7	53	569	0	0
5:45 PM	to	6:00 PM		0	0	0	0	0	313	16	2	12	0	37	2	65	561	0	3
6:00 PM	to	6:15 PM		0	0	0	0	0	321	29	0	17	0	46	2	49	506	0	1
6:15 PM	to	6:30 PM		0	0	0	0	0	321	17	2	18	0	39	1	45	486	0	4
6:30 PM	to	6:45 PM		0	0	0	0	0	310	13	0	7	0	37	0	49	430	1	4
6:45 PM	to	7:00 PM		0	0	1	0	1	264	11	1	20	0	29	0	34	445	1	5
PEAK HOURS																			
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:					**Landover Road**				**Pinebrook Avenue**				**Landover Road**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																			
7:15 AM	to	8:15 AM		0	0	0	8	0	2483	54	18	43	0	216	13	108	1298	1	2
PM INTERSECTION PEAK HOUR																			
4:45 PM	to	5:45 PM		1	0	0	7	1	1409	60	25	60	0	160	29	199	2328	1	11
AM SYSTEM PEAK HOUR														13					
7:30 AM	to	8:30 AM		0	0	0	9	0	2340	60	17	40	0	216	13	105	1374	1	2
PM SYSTEM PEAK HOUR																			
5:00 PM	to	6:00 PM		0	0	0	5	0	1355	61	21	60	0	148	16	207	2304	0	11

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
					Landover Road				**Pinebrook Avenue**				**Landover Road**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.88	0.71	**0.88**	0.83	0.00	0.89	**0.90**	0.75	0.94	0.25	**0.93**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.90	0.73	**0.91**	0.71	0.00	0.97	**0.91**	0.80	0.94	0.00	**0.96**

Overall AM PEAK HOUR FACTOR = **0.92** **Overall PM PEAK HOUR FACTOR** = **0.95**

AM Period Intersection Volume: 10511 **PM Period Intersection Volume:** 11649

Gorove/Slade Associates

Project Name :	FBI Headquarters Relocation
Project # :	2709-013
Location	Landover, Maryland
Data Source:	Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: Landover Road & Kent Town Place/75th Avenue (Signalized)

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**75th Avenue**				**Landover Road**				**Kent Town Place**				**Landover Road**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	6	13	21	0	29	390	5	2	9	15	31	0	5	175	17	0
6:45 AM	to	7:00 AM	17	10	21	0	64	508	15	1	8	16	33	1	7	173	14	0
7:00 AM	to	7:15 AM	19	19	43	0	57	555	11	2	7	20	42	1	10	167	17	0
7:15 AM	to	7:30 AM	19	21	42	0	46	651	19	0	7	15	29	2	4	264	19	1
7:30 AM	to	7:45 AM	18	25	46	0	72	620	13	0	12	31	38	2	7	293	17	0
7:45 AM	to	8:00 AM	12	26	34	0	76	602	18	1	10	35	36	1	4	328	21	0
8:00 AM	to	8:15 AM	10	21	40	0	50	508	19	2	12	23	36	1	7	344	15	0
8:15 AM	to	8:30 AM	10	12	37	0	48	423	21	2	8	23	34	1	5	346	14	2
8:30 AM	to	8:45 AM	15	11	48	0	52	439	12	1	7	14	29	4	4	276	19	1
8:45 AM	to	9:00 AM	19	16	26	0	56	385	21	1	12	17	20	1	7	295	13	1
9:00 AM	to	9:15 AM	5	16	40	0	44	335	28	3	8	20	22	1	5	284	11	1
9:15 AM	to	9:30 AM	6	13	25	0	51	331	29	3	5	9	20	2	7	224	10	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**75th Avenue**				**Landover Road**				**Kent Town Place**				**Landover Road**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	27	26	56	0	36	262	20	2	15	22	15	2	11	473	14	0
4:15 PM	to	4:30 PM	17	16	37	0	41	313	35	3	10	25	13	7	9	460	13	5
4:30 PM	to	4:45 PM	13	25	46	0	40	305	32	3	12	34	23	5	16	500	20	2
4:45 PM	to	5:00 PM	10	25	54	0	60	395	31	2	14	26	22	0	7	545	11	2
5:00 PM	to	5:15 PM	11	26	71	0	30	311	27	0	18	21	20	1	14	488	19	0
5:15 PM	to	5:30 PM	10	27	57	0	41	344	27	0	13	24	27	1	9	552	12	0
5:30 PM	to	5:45 PM	13	27	49	0	19	280	32	0	20	32	32	4	10	508	15	0
5:45 PM	to	6:00 PM	6	26	52	0	41	295	21	0	14	14	22	0	9	475	16	0
6:00 PM	to	6:15 PM	16	21	48	0	29	284	37	0	10	11	31	1	16	460	11	3
6:15 PM	to	6:30 PM	6	19	33	0	36	299	34	0	12	26	25	3	11	420	17	2
6:30 PM	to	6:45 PM	4	22	32	0	20	270	31	0	13	17	21	3	11	379	17	0
6:45 PM	to	7:00 PM	8	17	29	0	27	219	21	0	14	17	24	2	8	419	11	1

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**75th Avenue**				**Landover Road**				**Kent Town Place**				**Landover Road**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
Location																		
AM PEAK																		
		Direction:																
		Roadway:																
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	6	13	21	0	29	390	5	2	9	15	31	0	5	175	17	0
6:45 AM	to	7:00 AM	17	10	21	0	64	508	15	1	8	16	33	1	7	173	14	0
7:00 AM	to	7:15 AM	19	19	43	0	57	555	11	2	7	20	42	1	10	167	17	0
7:15 AM	to	7:30 AM	19	21	42	0	46	651	19	0	7	15	29	2	4	264	19	1
7:30 AM	to	7:45 AM	18	25	46	0	72	620	13	0	12	31	38	2	7	293	17	0
7:45 AM	to	8:00 AM	12	26	34	0	76	602	18	1	10	35	36	1	4	328	21	0
8:00 AM	to	8:15 AM	10	21	40	0	50	508	19	2	12	23	36	1	7	344	15	0
8:15 AM	to	8:30 AM	10	12	37	0	48	423	21	2	8	23	34	1	5	346	14	2
8:30 AM	to	8:45 AM	15	11	48	0	52	439	12	1	7	14	29	4	4	276	19	1

AM PEAK HOUR

PM PEAK HOUR

Overall AM PEAK HOUR FACTOR

AM Period Intersection Volume: 1152

Overall PM PEAK HOUR FACTOR

PM Period Intersection Volume: 1202

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & Kent Village Drive (TWSC)**

AM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Kent Village Drive**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	0	0	0	0	424	0	0	13	0	0	0	3	186	0	0
6:45 AM	to	7:00 AM	0	0	0	0	0	587	0	0	8	0	0	0	2	185	0	1
7:00 AM	to	7:15 AM	0	0	0	0	0	623	0	0	11	0	0	0	1	204	0	0
7:15 AM	to	7:30 AM	0	0	0	0	0	716	0	0	13	0	0	0	3	273	0	0
7:30 AM	to	7:45 AM	0	0	0	0	0	705	0	0	20	0	0	0	5	328	0	0
7:45 AM	to	8:00 AM	0	0	0	0	0	696	0	0	11	0	0	0	4	385	0	1
8:00 AM	to	8:15 AM	0	0	0	0	0	577	0	0	19	0	0	0	2	349	0	2
8:15 AM	to	8:30 AM	0	0	0	0	0	492	0	0	14	0	0	0	4	390	0	1
8:30 AM	to	8:45 AM	0	0	0	1	0	503	0	0	13	0	0	0	2	331	0	1
8:45 AM	to	9:00 AM	0	0	0	0	0	462	0	0	14	0	0	0	7	351	0	0
9:00 AM	to	9:15 AM	0	0	0	0	0	407	0	0	13	0	0	0	5	309	0	1
9:15 AM	to	9:30 AM	0	0	0	0	0	411	0	0	11	0	0	0	5	280	0	7

PM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Kent Village Drive**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	0	0	0	0	0	318	0	0	8	0	0	0	5	517	0	5
4:15 PM	to	4:30 PM	0	0	0	0	0	389	0	0	20	0	0	0	4	529	0	2
4:30 PM	to	4:45 PM	0	0	0	1	0	377	0	0	27	0	0	0	10	527	0	0
4:45 PM	to	5:00 PM	0	0	0	0	0	486	0	0	15	0	0	0	8	585	0	3
5:00 PM	to	5:15 PM	0	0	0	0	0	368	0	0	15	0	0	0	17	572	0	3
5:15 PM	to	5:30 PM	0	0	0	0	0	412	0	0	19	0	0	0	10	639	0	0
5:30 PM	to	5:45 PM	0	0	0	0	0	331	0	0	18	0	0	0	2	628	0	0
5:45 PM	to	6:00 PM	0	0	0	0	0	357	0	0	11	0	0	0	5	599	0	4
6:00 PM	to	6:15 PM	0	0	0	0	0	350	0	0	24	0	0	0	10	507	0	4
6:15 PM	to	6:30 PM	0	0	0	1	0	369	0	0	15	0	0	0	6	505	0	1
6:30 PM	to	6:45 PM	0	0	0	0	0	321	0	0	14	0	0	0	5	435	0	3
6:45 PM	to	7:00 PM	0	0	0	0	0	267	0	0	14	0	0	0	9	431	0	1

PEAK HOURS			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Kent Village Drive**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	0	0	0	0	0	2694	0	0	63	0	0	0	14	1335	0	3
PM INTERSECTION PEAK HOUR																		
4:45 PM	to	5:45 PM	0	0	0	0	0	1597	0	0	67	0	0	0	37	2424	0	6
AM SYSTEM PEAK HOUR													13					
7:30 AM	to	8:30 AM	0	0	0	0	0	2470	0	0	64	0	0	0	15	1452	0	4
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	0	0	0	0	0	1468	0	0	63	0	0	0	34	2438	0	7

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
					Landover Road				**Kent Village Drive**				**Landover Road**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.88	0.00	**0.88**	0.80	0.00	0.00	**0.80**	0.75	0.93	0.00	**0.93**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.89	0.00	**0.89**	0.83	0.00	0.00	**0.83**	0.50	0.95	0.00	**0.95**

Overall AM PEAK HOUR FACTOR = **0.91** **Overall PM PEAK HOUR FACTOR** = **0.93**

AM Period Intersection Volume: 10377 **PM Period Intersection Volume:** 11110

Gorove/Slade Associates

Project Name :	FBI Headquarters Relocation
Project # :	2709-013
Location	Landover, Maryland
Data Source:	Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: Landover Road & Dodge Park Road (Signalized)

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Dodge Park Road				Landover Road								Landover Road			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	33	0	10	0	2	396	0	1	0	0	0	0	0	179	31	3
6:45 AM	to	7:00 AM	18	0	9	0	5	578	0	1	0	0	0	1	0	174	13	1
7:00 AM	to	7:15 AM	27	0	8	0	17	595	0	3	0	0	0	0	0	187	24	0
7:15 AM	to	7:30 AM	55	0	13	0	14	619	0	2	0	0	0	0	0	244	33	1
7:30 AM	to	7:45 AM	49	0	24	0	8	656	0	0	0	0	0	1	0	314	31	0
7:45 AM	to	8:00 AM	29	0	18	0	11	656	0	5	0	0	0	0	0	380	28	0
8:00 AM	to	8:15 AM	30	0	15	0	12	538	0	0	0	0	0	0	0	345	35	1
8:15 AM	to	8:30 AM	26	0	15	0	4	466	0	0	0	0	0	0	0	376	31	1
8:30 AM	to	8:45 AM	37	0	18	0	4	449	0	1	0	0	0	0	0	321	28	1
8:45 AM	to	9:00 AM	27	0	13	0	6	432	0	3	0	0	0	0	0	340	20	1
9:00 AM	to	9:15 AM	31	0	17	0	15	357	0	1	0	0	0	1	0	271	43	2
9:15 AM	to	9:30 AM	23	0	18	0	5	269	0	5	0	0	0	2	0	255	30	2

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Dodge Park Road				Landover Road								Landover Road			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	51	0	30	0	13	267	0	2	0	0	0	2	0	468	62	3
4:15 PM	to	4:30 PM	49	0	26	0	13	308	0	0	0	0	0	0	0	482	68	1
4:30 PM	to	4:45 PM	57	0	23	1	18	341	0	1	0	0	0	0	0	483	63	1

Location

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Dodge Park Road				Landover Road								Landover Road			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	33	0	10	0	2	396	0	1	0	0	0	0	0	179	31	3
6:45 AM	to	7:00 AM	18	0	9	0	5	578	0	1	0	0	0	1	0	174	13	1
7:00 AM	to	7:15 AM	27	0	8	0	17	595	0	3	0	0	0	0	0	187	24	0
7:15 AM	to	7:30 AM	55	0	13	0	14	619	0	2	0	0	0	0	0	244	33	1
7:30 AM	to	7:45 AM	49	0	24	0	8	656	0	0	0	0	0	1	0	314	31	0
7:45 AM	to	8:00 AM	29	0	18	0	11	656	0	5	0	0	0	0	0	380	28	0
8:00 AM	to	8:15 AM	30	0	15	0	12	538	0	0	0	0	0	0	0	345	35	1
8:15 AM	to	8:30 AM	26	0	15	0	4	466	0	0	0	0	0	0	0	376	31	1
8:30 AM	to	8:45 AM	37	0	18	0	4	449	0	1	0	0	0	0	0	321	28	1
8:45 AM	to	9:00 AM	27	0	13	0	6	432	0	3	0	0	0	0	0	340	20	1
9:00 AM	to	9:15 AM	31	0	17	0	15	357	0	1	0	0	0	1	0	271	43	2
9:15 AM	to	9:30 AM	23	0	18	0	5	269	0	5	0	0	0	2	0	255	30	2

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Dodge Park Road				Landover Road								Landover Road			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	51	0	30	0	13	267	0	2	0	0	0	2	0	468	62	3
4:15 PM	to	4:30 PM	49	0	26	0	13	308	0	0	0	0	0	0	0	482	68	1
4:30 PM	to	4:45 PM	57	0	23	1	18	341	0	1	0	0	0	0	0	483	63	1
4:45 PM	to	5:00 PM	56	0	21	0	5	390	0	1	0	0	0	1	0	561	56	0
5:00 PM	to	5:15 PM	38	0	36	0	10	322	0	2	0	0	0	4	0	531	76	2
5:15 PM	to	5:30 PM	43	0	20	0	13	381	0	2	0	0	0	1	0	591	50	1

AM PEAK HOUR

PM PEAK HOUR

Overall AM PEAK HOUR FACTOR

AM Period Intersection Volume: 10410

Overall PM PEAK HOUR FACTOR

PM Period Intersection Volume: 11450

Gorove/Slade Associates

Project Name : LBG-Landover Site
Project # : 2079-013
Location MD 202/Fire House Road
Data Source: SHA

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & Fire House Road (Signalized)**

AM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Shopping Center**				**MD 202**				**Fire House Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	5	1	10	1	9	410	1	0	5	2	9	2	2	162	9	1
6:45 AM	to	7:00 AM	7	1	6	2	18	545	5	0	6	4	10	0	9	183	7	0
7:00 AM	to	7:15 AM	8	1	7	1	20	584	5	0	6	3	14	4	4	179	11	0
7:15 AM	to	7:30 AM	1	2	9	7	19	649	11	0	12	8	28	1	9	241	6	1
7:30 AM	to	7:45 AM	7	1	17	2	20	614	3	0	6	8	12	1	13	321	18	0
7:45 AM	to	8:00 AM	3	9	10	4	23	633	10	0	8	2	17	2	5	378	6	0
8:00 AM	to	8:15 AM	7	4	10	5	21	514	10	0	15	4	16	3	12	332	8	0
8:15 AM	to	8:30 AM	3	4	15	8	23	452	8	0	3	4	7	4	13	380	13	2
8:30 AM	to	8:45 AM	7	1	15	3	22	427	7	2	17	2	13	5	5	312	18	1
8:45 AM	to	9:00 AM	10	0	25	1	20	429	2	0	5	9	6	0	8	337	11	1
9:00 AM	to	9:15 AM	13	4	16	2	26	355	3	0	9	8	7	1	8	265	20	0
9:15 AM	to	9:30 AM	7	5	20	3	28	364	16	0	7	4	10	3	8	266	8	2

PM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Shopping Center**				**MD 202**				**Fire House Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	5	11	23	5	28	250	11	0	4	4	11	1	16	452	17	0
4:15 PM	to	4:30 PM	12	5	23	0	32	308	14	0	8	5	12	3	16	486	12	0
4:30 PM	to	4:45 PM	7	6	28	4	26	333	13	2	7	4	11	2	20	470	20	0
4:45 PM	to	5:00 PM	4	9	22	8	31	360	20	3	11	3	16	5	17	548	22	2
5:00 PM	to	5:15 PM	3	5	28	9	32	313	13	1	10	10	16	2	25	519	21	0
5:15 PM	to	5:30 PM	3	11	30	8	20	347	14	0	14	1	14	4	12	580	21	1
5:30 PM	to	5:45 PM	4	7	27	16	25	296	13	2	7	12	10	2	16	586	26	5
5:45 PM	to	6:00 PM	4	11	24	6	46	316	12	0	9	2	12	7	21	546	17	2
6:00 PM	to	6:15 PM	7	6	23	5	23	306	9	0	7	6	13	3	14	477	24	1
6:15 PM	to	6:30 PM	4	7	34	4	30	307	15	0	10	3	14	2	13	467	24	2
6:30 PM	to	6:45 PM	10	6	27	8	23	290	10	0	6	8	9	0	16	413	20	0
6:45 PM	to	7:00 PM	5	9	24	8	33	256	12	0	5	11	8	1	10	389	22	2

PEAK HOURS			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Shopping Center**				**MD 202**				**Fire House Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	18	16	46	18	83	2410	34	0	41	22	73	7	39	1272	38	1
PM INTERSECTION PEAK HOUR																		
4:45 PM	to	5:45 PM	14	32	107	41	108	1316	60	6	42	26	56	35	70	2233	90	8
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	20	18	52	19	87	2213	31	0	32	18	52	10	43	1411	45	2
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	14	34	109	39	123	1272	52	3	40	25	52	15	74	2231	85	8

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
	Shopping Center				**MD 202**				**Fire House Road**				**MD 202**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.71	0.50	0.76	**#DIV/0!**	0.95	0.87	0.78	**0.88**	0.53	0.56	0.76	**0.73**	0.83	0.93	0.63	**0.92**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.88	0.77	0.91	**#DIV/0!**	0.67	0.92	0.93	**0.95**	0.71	0.52	0.81	**0.81**	0.74	0.95	0.82	**0.95**

Overall AM PEAK HOUR FACTOR = **0.91** **Overall PM PEAK HOUR FACTOR** = **0.96**

AM Period Intersection Volume: 10470 **PM Period Intersection Volume:** 11349

Gorove/Slade Associates

Project Name :	LBG-Landover Site
Project # :	2079-013
Location	MD 202/Kenmoor
Data Source:	SHA

Date of Counts: Wednesday, November 5, 2014

Intersection: Landover Road & Kenmoor Drive (Signalized)

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Kenmoor Drive				MD 202				Wendy's				MD 202			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	4	0	3	0	2	391	0	0	0	0	0	0	0	192	1	0
6:45 AM	to	7:00 AM	4	0	1	0	3	558	1	0	0	0	0	0	0	209	1	0
7:00 AM	to	7:15 AM	9	0	1	0	3	559	0	0	0	0	0	0	0	196	2	0
7:15 AM	to	7:30 AM	3	0	4	0	4	681	1	0	1	0	1	0	1	230	2	1
7:30 AM	to	7:45 AM	4	0	3	0	4	588	1	1	0	0	0	1	0	316	8	1
7:45 AM	to	8:00 AM	10	0	4	0	10	637	2	3	0	0	0	3	0	347	11	0
8:00 AM	to	8:15 AM	9	0	1	0	12	506	2	0	1	0	0	1	0	359	11	1
8:15 AM	to	8:30 AM	6	0	6	0	16	455	2	0	0	0	1	0	0	376	13	0
8:30 AM	to	8:45 AM	5	0	3	0	26	439	2	1	1	0	0	9	0	373	19	5
8:45 AM	to	9:00 AM	19	1	7	0	35	422	1	2	0	1	0	17	0	345	27	1
9:00 AM	to	9:15 AM	30	0	22	0	41	345	0	2	0	0	0	35	0	287	39	1
9:15 AM	to	9:30 AM	35	0	16	0	38	388	2	0	1	0	1	13	0	263	24	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Kenmoor Drive				MD 202				Wendy's				MD 202			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	25	2	16	0	10	269	3	1	6	1	3	1	0	472	15	0
4:15 PM	to	4:30 PM	43	0	16	0	9	341	6	0	8	1	3	87	1	484	14	32
4:30 PM	to	4:45 PM	24	3	16	0	15	394	5	0	6	2	2	5	0	462	14	2
4:45 PM	to	5:00 PM	19	0	10	0	16	398	0	0	3	1	7	0	0	553	14	0
5:00 PM	to	5:15 PM	6	1	9	0	13	345	3	1	1	1	4	1	0	525	16	0
5:15 PM	to	5:30 PM	13	0	7	0	18	394	5	0	5	1	3	0	0	578	12	1
5:30 PM	to	5:45 PM	15	0	7	1	14	329	2	0	4	1	8	3	0	529	19	2
5:45 PM	to	6:00 PM	17	1	7	0	19	360	2	0	6	2	3	0	0	504	22	0
6:00 PM	to	6:15 PM	19	0	17	1	13	308	5	2	5	1	2	1	1	472	22	1
6:15 PM	to	6:30 PM	16	1	12	0	9	342	1	0	7	0	7	3	0	440	17	0
6:30 PM	to	6:45 PM	10	0	3	0	13	329	2	0	7	1	4	0	0	396	22	0
6:45 PM	to	7:00 PM	7	0	11	0	10	304	4	1	8	0	4	2	0	418	8	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
			Kenmoor Drive				MD 202				Wendy's				MD 202			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	26	0	12	0	30	2412	6	4	2	0	1	5	1	1252	32	3
PM INTERSECTION PEAK HOUR																		
4:30 PM	to	5:30 PM	62	4	42	0	62	1531	13	1	15	5	16	6	0	2118	56	3
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	29	0	14	0	42	2186	7	4	1	0	1	5	0	1398	43	2
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	51	2	30	1	64	1428	12	1	16	5	18	4	0	2136	69	3

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Kenmoor Drive				MD 202				Wendy's				MD 202			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.73	0.00	0.58	**#DIV/0!**	0.66	0.86	0.88	**0.86**	0.25	0.00	0.25	**0.50**	0.00	0.93	0.83	**0.93**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.75	0.50	0.83	**#DIV/0!**	0.84	0.91	0.60	**0.90**	0.67	0.63	0.56	**0.75**	0.00	0.92	0.78	**0.93**

Overall AM PEAK HOUR FACTOR = **0.91** **Overall PM PEAK HOUR FACTOR** = **0.92**

AM Period Intersection Volume: 10047 **PM Period Intersection Volume:** 10821

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & Barlowe Road (Signalized)**

AM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Barlowe Road**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	0	0	1	0	417	22	0	19	0	8	1	5	194	0	0
6:45 AM	to	7:00 AM	0	0	0	0	0	529	19	0	19	0	22	0	3	211	0	0
7:00 AM	to	7:15 AM	0	0	0	0	0	573	22	0	19	0	14	0	3	192	0	0
7:15 AM	to	7:30 AM	0	0	0	0	0	649	36	0	35	0	16	2	6	232	0	0
7:30 AM	to	7:45 AM	0	0	0	0	0	567	47	2	25	0	18	1	6	310	0	0
7:45 AM	to	8:00 AM	0	0	0	0	0	617	64	0	60	0	18	0	6	357	0	0
8:00 AM	to	8:15 AM	0	0	0	0	0	495	49	0	37	0	14	0	11	352	2	0
8:15 AM	to	8:30 AM	0	0	0	0	0	454	27	0	27	0	9	0	12	372	2	1
8:30 AM	to	8:45 AM	0	0	0	0	0	467	44	1	20	0	15	0	8	366	1	2
8:45 AM	to	9:00 AM	0	0	0	0	0	425	35	0	30	0	17	0	6	354	0	1
9:00 AM	to	9:15 AM	0	0	0	0	0	399	49	1	24	0	12	1	13	294	0	0
9:15 AM	to	9:30 AM	0	0	0	0	0	373	48	0	27	0	16	0	7	274	0	1

PM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Barlowe Road**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	0	0	0	0	0	288	35	0	27	0	6	0	16	468	0	0
4:15 PM	to	4:30 PM	0	0	0	0	0	357	34	2	45	0	12	0	22	484	1	1
4:30 PM	to	4:45 PM	0	0	0	0	0	376	31	1	45	0	14	0	15	457	1	1
4:45 PM	to	5:00 PM	0	0	0	0	0	369	28	0	28	0	18	0	16	546	2	0
5:00 PM	to	5:15 PM	0	0	0	1	0	384	39	0	35	0	9	0	21	504	1	0
5:15 PM	to	5:30 PM	0	0	0	0	0	370	30	0	50	0	11	1	18	568	3	0
5:30 PM	to	5:45 PM	0	0	0	0	0	324	26	0	36	0	10	0	18	505	4	0
5:45 PM	to	6:00 PM	0	0	0	0	0	360	28	0	31	0	10	0	14	509	3	0
6:00 PM	to	6:15 PM	0	0	0	0	0	304	30	2	28	0	18	0	13	484	2	0
6:15 PM	to	6:30 PM	0	0	0	0	0	325	42	0	36	0	15	0	14	434	4	0
6:30 PM	to	6:45 PM	0	0	0	0	0	353	31	0	32	0	11	0	16	388	6	0
6:45 PM	to	7:00 PM	0	0	0	0	0	308	29	0	25	0	13	0	15	404	15	0

PEAK HOURS			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:							**Landover Road**				**Barlowe Road**				**Landover Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	0	0	0	0	0	2328	196	2	157	0	66	3	29	1251	2	0
PM INTERSECTION PEAK HOUR																		
4:30 PM	to	5:30 PM	0	0	0	1	0	1499	128	1	158	0	52	1	70	2075	7	1
AM SYSTEM PEAK HOUR													13					
7:30 AM	to	8:30 AM	0	0	0	0	0	2133	187	2	149	0	59	1	35	1391	4	1
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	0	0	0	1	0	1438	123	0	152	0	40	1	71	2086	11	0

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
					Landover Road				**Barlowe Road**				**Landover Road**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.86	0.73	**0.85**	0.62	0.00	0.82	**0.67**	0.73	0.93	0.50	**0.93**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.00	0.94	0.79	**0.92**	0.76	0.00	0.91	**0.79**	0.85	0.92	0.69	**0.92**

Overall AM PEAK HOUR FACTOR = **0.88** **Overall PM PEAK HOUR FACTOR** = **0.93**

AM Period Intersection Volume: 10547 **PM Period Intersection Volume:** 11057

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Thursday, March 20, 2014

Intersection: **Landover Road & Brightseat Road (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd.**				**Landover Rd.**				**Brightseat Rd.**				**Landover Rd.**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	11	15	32	0	21	226	23	0	44	19	31	0	29	148	14	0
6:45 AM	to	7:00 AM	14	11	45	1	29	263	28	0	38	26	42	0	37	166	6	0
7:00 AM	to	7:15 AM	23	30	51	0	37	308	32	0	39	34	46	0	46	175	5	0
7:15 AM	to	7:30 AM	17	36	63	2	42	579	99	0	68	26	57	0	51	200	13	0
7:30 AM	to	7:45 AM	21	33	62	1	37	542	83	0	71	38	68	0	48	229	14	0
7:45 AM	to	8:00 AM	25	24	76	0	53	492	107	0	79	44	103	0	55	296	26	1
8:00 AM	to	8:15 AM	20	43	55	0	50	418	93	0	84	31	72	0	50	236	13	0
8:15 AM	to	8:30 AM	14	17	45	3	40	366	91	0	79	42	128	0	62	261	10	0
8:30 AM	to	8:45 AM	19	25	55	0	72	406	113	0	107	31	75	0	64	292	9	0
8:45 AM	to	9:00 AM	43	24	59	4	51	405	127	0	81	47	63	0	63	262	23	0
9:00 AM	to	9:15 AM	20	28	63	1	45	302	99	0	71	33	60	0	41	278	13	0
9:15 AM	to	9:30 AM	13	22	40	1	25	282	83	0	49	21	38	0	47	209	16	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd.**				**Landover Rd.**				**Brightseat Rd.**				**Landover Rd.**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	21	35	76	0	50	269	100	0	120	43	70	0	81	359	21	0
4:15 PM	to	4:30 PM	19	38	75	1	66	305	96	0	125	38	67	0	75	459	15	0
4:30 PM	to	4:45 PM	21	44	79	0	91	304	111	0	122	36	76	0	99	467	19	0
4:45 PM	to	5:00 PM	21	40	78	3	67	302	126	0	121	37	68	0	106	423	12	0
5:00 PM	to	5:15 PM	26	43	90	0	71	304	88	0	137	52	101	0	104	425	22	0
5:15 PM	to	5:30 PM	29	42	82	2	86	335	99	0	134	55	78	0	116	317	25	0
5:30 PM	to	5:45 PM	24	48	106	0	84	314	141	0	158	44	65	0	110	351	13	0
5:45 PM	to	6:00 PM	23	47	100	0	87	301	198	0	188	38	81	0	140	427	24	0
6:00 PM	to	6:15 PM	21	31	87	4	86	301	160	0	172	39	73	0	112	454	27	0
6:15 PM	to	6:30 PM	18	43	112	0	70	326	188	0	172	32	69	0	115	379	27	0
6:30 PM	to	6:45 PM	19	32	89	1	55	269	170	0	158	49	69	0	96	440	28	0
6:45 PM	to	7:00 PM	13	29	91	0	77	229	205	0	219	33	68	0	96	381	28	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd.**				**Landover Rd.**				**Brightseat Rd.**				**Landover Rd.**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	83	136	256	3	182	2031	382	0	302	139	300	0	204	961	66	1
PM INTERSECTION PEAK HOUR																		
5:45 PM	to	6:45 PM	81	153	388	5	298	1197	716	0	690	158	292	0	463	1700	106	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	80	117	238	4	180	1818	374	0	313	155	371	0	215	1022	63	1
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	102	180	378	2	328	1254	526	0	617	189	325	0	470	1520	84	0

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Brightseat Rd.				**Landover Rd.**				**Brightseat Rd.**				**Landover Rd.**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.80	0.68	0.78	**0.87**	0.85	0.84	0.87	**0.90**	0.93	0.88	0.72	**0.84**	0.87	0.86	0.61	**0.86**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.88	0.94	0.89	**0.93**	0.94	0.94	0.66	**0.90**	0.82	0.86	0.80	**0.92**	0.84	0.89	0.84	**0.88**

Overall AM PEAK HOUR FACTOR = **0.90** **Overall PM PEAK HOUR FACTOR** = **0.90**

AM Period Intersection Volume: 12755 **PM Period Intersection Volume:** 17523

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Thursday, March 13, 2014

Intersection: **Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			495 Exit Ramp				Landover Rd.				495 Exit Ramp				Landover Rd.			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	64	0	0	0	0	298	20	0	113	0	0	0	125	119	0	0
6:45 AM	to	7:00 AM	83	0	0	0	0	333	24	0	127	0	0	0	106	133	0	0
7:00 AM	to	7:15 AM	62	0	0	0	0	395	44	0	145	0	0	0	93	148	0	0
7:15 AM	to	7:30 AM	65	0	0	0	0	314	42	0	127	0	0	0	142	169	0	0
7:30 AM	to	7:45 AM	72	0	0	0	0	356	34	0	224	0	0	0	165	192	0	0
7:45 AM	to	8:00 AM	91	0	0	0	0	284	49	0	210	0	0	0	129	227	0	0
8:00 AM	to	8:15 AM	83	0	0	0	0	292	63	0	255	0	0	0	133	287	0	0
8:15 AM	to	8:30 AM	85	0	0	0	0	266	53	0	241	0	0	0	132	224	0	0
8:30 AM	to	8:45 AM	82	0	0	0	0	285	66	0	266	0	0	0	144	241	0	0
8:45 AM	to	9:00 AM	89	0	0	0	0	291	58	0	262	0	0	0	160	223	0	0
9:00 AM	to	9:15 AM	55	0	0	0	0	208	47	0	285	0	0	0	123	255	0	0
9:15 AM	to	9:30 AM	61	0	0	0	0	230	51	0	214	0	0	0	113	225	0	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			495 Exit Ramp				Landover Rd.				495 Exit Ramp				Landover Rd.			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	72	0	0	0	0	211	62	0	201	0	0	0	171	331	0	0
4:15 PM	to	4:30 PM	73	0	0	0	0	257	74	0	197	0	0	0	199	321	0	0
4:30 PM	to	4:45 PM	64	0	0	0	0	211	78	0	189	0	0	0	232	375	0	0
4:45 PM	to	5:00 PM	89	0	0	0	0	252	66	0	205	0	0	0	220	406	0	0
5:00 PM	to	5:15 PM	49	0	0	0	0	234	74	0	222	0	0	0	208	411	0	0
5:15 PM	to	5:30 PM	60	0	0	0	0	241	80	0	206	0	0	0	247	433	0	0
5:30 PM	to	5:45 PM	74	0	0	0	0	249	65	0	244	0	0	0	190	449	0	0
5:45 PM	to	6:00 PM	78	0	0	0	0	252	58	0	251	0	0	0	243	454	0	0
6:00 PM	to	6:15 PM	86	0	0	0	0	194	74	0	238	0	0	0	180	409	0	0
6:15 PM	to	6:30 PM	71	0	0	0	0	247	68	0	212	0	0	0	183	402	0	0
6:30 PM	to	6:45 PM	55	0	0	0	0	216	62	0	202	0	0	0	176	399	0	0
6:45 PM	to	7:00 PM	68	0	0	0	0	272	76	0	196	0	0	0	175	372	0	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			495 Exit Ramp				Landover Rd.				495 Exit Ramp				Landover Rd.			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
8:00 AM	to	9:00 AM	339	0	0	0	0	1134	240	0	1024	0	0	0	569	975	0	0
PM INTERSECTION PEAK HOUR																		
5:00 PM	to	6:00 PM	261	0	0	0	0	976	277	0	923	0	0	0	888	1747	0	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	331	0	0	0	0	1198	199	0	930	0	0	0	559	930	0	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	261	0	0	0	0	976	277	0	923	0	0	0	888	1747	0	0

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	495 Exit Ramp				Landover Rd.				495 Exit Ramp				Landover Rd.			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.91	0.00	0.00	**0.91**	0.00	0.84	0.79	**0.90**	0.91	0.00	0.00	**0.91**	0.85	0.81	0.00	**0.89**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.84	0.00	0.00	**0.84**	0.00	0.97	0.87	**0.98**	0.92	0.00	0.00	**0.92**	0.90	0.96	0.00	**0.95**

Overall AM PEAK HOUR FACTOR = **0.93** **Overall PM PEAK HOUR FACTOR** = **0.95**

AM Period Intersection Volume: 11472 **PM Period Intersection Volume:** 14261

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Thursday, March 20, 2014

Intersection: **Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)**

AM PEAK																	
		Direction:	Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**495 On Ramps**				**Landover Rd.**				**495 Exit Ramp**				**Landover Rd.**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	R to St. J Dr.	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	0	0	0	213	282	0	0	15	4	132	0	36	143	2	0
6:45 AM	to	7:00 AM	0	0	0	0	147	346	0	0	26	9	180	0	47	193	3	0
7:00 AM	to	7:15 AM	0	0	0	0	201	426	0	0	35	10	200	0	34	237	4	0
7:15 AM	to	7:30 AM	0	0	0	0	234	524	0	0	37	9	225	0	38	306	1	0
7:30 AM	to	7:45 AM	0	0	0	0	230	462	0	0	37	9	170	0	43	362	4	0
7:45 AM	to	8:00 AM	0	0	0	0	279	518	0	0	35	15	171	0	45	468	7	0
8:00 AM	to	8:15 AM	0	0	0	0	212	402	0	0	35	14	158	0	44	375	2	0
8:15 AM	to	8:30 AM	0	0	0	0	153	372	0	0	44	4	117	0	33	438	4	0
8:30 AM	to	8:45 AM	0	0	0	0	224	452	0	0	61	15	202	0	36	535	5	0
8:45 AM	to	9:00 AM	0	0	0	0	204	349	0	0	59	15	241	0	31	440	3	0
9:00 AM	to	9:15 AM	0	0	0	0	234	288	0	0	50	27	149	0	31	438	6	0
9:15 AM	to	9:30 AM	0	0	0	0	249	254	0	0	43	12	121	0	43	425	5	0

PM PEAK																		
		Direction:	Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**495 On Ramps**				**Landover Rd.**				**495 Exit Ramp**				**Landover Rd.**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	R to St. J Dr.	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	0	0	0	0	254	247	0	0	28	19	116	0	42	413	9	0
4:15 PM	to	4:30 PM	0	0	0	0	232	265	0	0	30	22	129	0	36	401	8	0
4:30 PM	to	4:45 PM	0	0	0	0	278	296	0	0	25	24	143	0	44	470	8	0
4:45 PM	to	5:00 PM	0	0	0	0	270	338	0	0	25	29	166	0	32	459	8	0
5:00 PM	to	5:15 PM	0	0	0	0	273	391	0	0	41	32	180	0	30	430	8	0
5:15 PM	to	5:30 PM	0	0	0	0	305	412	0	0	42	32	180	0	23	487	7	0
5:30 PM	to	5:45 PM	0	0	0	0	307	354	0	0	28	50	190	0	23	458	3	0
5:45 PM	to	6:00 PM	0	0	0	0	268	415	0	0	55	58	182	0	31	582	6	0
6:00 PM	to	6:15 PM	0	0	0	0	341	351	0	0	42	61	164	0	41	575	5	0
6:15 PM	to	6:30 PM	0	0	0	0	253	369	0	0	41	56	152	0	38	505	9	0
6:30 PM	to	6:45 PM	0	0	0	0	171	348	0	0	46	51	155	0	47	501	10	0
6:45 PM	to	7:00 PM	0	0	0	0	135	365	0	0	35	58	129	0	42	412	2	0

PEAK HOURS																		
		Direction:	Southbound				Westbound				Northbound				Eastbound			
		Roadway:	**495 On Ramps**				**Landover Rd.**				**495 Exit Ramp**				**Landover Rd.**			
		Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:45 AM	to	8:45 AM	0	0	0	0	868	1744	0	0	175	48	648	0	158	1816	18	0
PM INTERSECTION PEAK HOUR																		
5:15 PM	to	6:15 PM	0	0	0	0	1221	1532	0	0	167	201	716	0	118	2102	21	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	0	0	0	0	874	1754	0	0	151	42	616	0	165	1643	17	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	0	0	0	0	1153	1572	0	0	166	172	732	0	107	1957	24	0

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
	495 On Ramps				**Landover Rd.**				**495 Exit Ramp**				**Landover Rd.**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.78	0.85	0.00	**0.82**	0.86	0.70	0.90	**0.92**	0.92	0.88	0.61	**0.88**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.94	0.95	0.00	**0.95**	0.75	0.74	0.96	**0.91**	0.86	0.84	0.75	**0.84**

Overall AM PEAK HOUR FACTOR = **0.86** **Overall PM PEAK HOUR FACTOR** = **0.92**

AM Period Intersection Volume: 14808 **PM Period Intersection Volume:** 16259

Gorove/Slade Associates

Project Name : LBG-Suitland Site
Project # : 2079-013
Location MD 202/McCormick/St. Josephs
Data Source: SHA

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)**

AM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**St. Josephs Dr.**				**MD 202**				**McCormick Dr.**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	24	1	8	0	8	402	5	0	1	0	19	0	32	164	33	0
6:45 AM	to	7:00 AM	35	9	9	0	23	582	8	0	2	3	13	0	62	205	36	0
7:00 AM	to	7:15 AM	41	5	3	0	12	640	8	0	2	4	13	0	62	173	38	0
7:15 AM	to	7:30 AM	51	7	7	1	17	684	9	0	4	4	28	0	88	202	35	0
7:30 AM	to	7:45 AM	56	9	15	0	20	618	15	0	5	4	16	1	95	246	42	0
7:45 AM	to	8:00 AM	45	14	17	0	35	706	33	0	5	4	21	0	109	337	36	0
8:00 AM	to	8:15 AM	43	9	13	0	39	594	36	0	6	5	35	0	165	327	58	0
8:15 AM	to	8:30 AM	36	10	14	0	22	492	25	0	12	6	29	1	189	315	55	0
8:30 AM	to	8:45 AM	44	9	12	0	23	488	20	0	7	11	29	0	215	398	52	0
8:45 AM	to	9:00 AM	52	11	10	0	29	441	30	0	9	6	36	0	182	408	50	0
9:00 AM	to	9:15 AM	43	11	17	0	36	443	23	0	10	7	31	0	172	347	70	0
9:15 AM	to	9:30 AM	47	4	15	1	27	396	9	0	11	5	41	0	107	295	70	0
PM PEAK																		
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**St. Josephs Dr.**				**MD 202**				**McCormick Dr.**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	127	14	61	0	80	371	8	0	38	15	115	0	34	394	140	0
4:15 PM	to	4:30 PM	119	15	70	0	75	350	6	0	21	17	105	1	21	421	128	0
4:30 PM	to	4:45 PM	128	15	79	0	83	411	4	0	38	17	109	0	46	413	141	0
4:45 PM	to	5:00 PM	126	21	82	0	84	359	5	0	21	15	100	1	46	481	132	0
5:00 PM	to	5:15 PM	116	19	83	0	85	377	5	0	41	18	167	0	41	486	121	0
5:15 PM	to	5:30 PM	114	15	76	0	68	404	7	0	28	14	113	0	51	459	146	0
5:30 PM	to	5:45 PM	104	13	86	0	78	358	0	0	32	25	93	0	45	456	132	0
5:45 PM	to	6:00 PM	111	14	77	0	76	397	7	0	26	21	75	0	42	502	137	0
6:00 PM	to	6:15 PM	111	13	73	0	110	312	4	0	20	15	60	2	48	475	139	0
6:15 PM	to	6:30 PM	127	13	64	0	86	318	10	1	6	18	47	1	37	426	145	0
6:30 PM	to	6:45 PM	135	19	79	0	57	275	4	0	5	10	39	0	41	409	146	0
6:45 PM	to	7:00 PM	134	13	87	0	63	280	7	0	5	7	25	0	37	417	135	0
PEAK HOURS																		
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**St. Josephs Dr.**				**MD 202**				**McCormick Dr.**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:45 AM	to	8:45 AM	168	42	56	0	119	2280	114	0	30	26	114	1	678	1377	201	0
PM INTERSECTION PEAK HOUR																		
4:30 PM	to	5:30 PM	484	70	320	0	320	1551	21	0	128	64	489	1	184	1839	540	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	180	42	59	0	116	2410	109	0	28	19	101	2	558	1225	191	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	445	61	322	0	307	1536	19	0	127	78	448	0	179	1903	536	0

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
	St. Josephs Dr.				**MD 202**				**McCormick Dr.**				**MD 202**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.80	0.75	0.87	**#DIV/0!**	0.74	0.85	0.76	**0.85**	0.58	0.79	0.72	**0.79**	0.74	0.91	0.82	**0.88**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.96	0.80	0.94	**#DIV/0!**	0.90	0.95	0.68	**0.97**	0.77	0.78	0.67	**0.72**	0.88	0.95	0.92	**0.96**

Overall AM PEAK HOUR FACTOR = **0.92** **Overall PM PEAK HOUR FACTOR** = **0.96**

AM Period Intersection Volume: 13668 **PM Period Intersection Volume:** 16768

Gorove/Slade Associates

Project Name : LBG-Landover Site
Project # : 2079-013
Location MD 202/Lottsford Road
Data Source: SHA

Date of Counts: Wednesday, November 05, 2014

Intersection: **Landover Road & Lottsford Road (Signalized)**

AM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Lottsford Road**				**MD 202**				**Lottsford Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	137	58	40	0	16	288	8	0	0	20	18	0	17	115	37	0
6:45 AM	to	7:00 AM	195	83	48	0	46	410	12	0	7	36	23	0	24	126	51	0
7:00 AM	to	7:15 AM	241	88	80	0	68	403	14	0	4	48	27	0	26	103	32	0
7:15 AM	to	7:30 AM	217	93	93	0	83	439	8	0	1	48	28	0	15	140	53	0
7:30 AM	to	7:45 AM	242	111	101	0	101	466	20	0	3	62	31	2	16	194	47	0
7:45 AM	to	8:00 AM	248	118	117	0	116	500	20	0	3	75	35	0	22	249	59	0
8:00 AM	to	8:15 AM	216	119	97	0	80	430	11	0	8	41	35	0	24	300	50	0
8:15 AM	to	8:30 AM	156	101	115	1	98	418	19	0	6	64	23	0	21	263	56	0
8:30 AM	to	8:45 AM	126	64	107	0	64	350	12	0	4	51	28	0	36	262	61	0
8:45 AM	to	9:00 AM	133	93	122	0	83	357	15	2	7	44	30	4	49	329	68	0
9:00 AM	to	9:15 AM	134	71	92	0	67	355	6	0	5	43	32	0	36	260	71	0
9:15 AM	to	9:30 AM	128	57	77	0	38	319	11	0	8	39	27	0	24	214	61	0

PM PEAK			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Lottsford Road**				**MD 202**				**Lottsford Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	82	59	64	0	105	355	4	0	22	86	53	0	39	326	94	0
4:15 PM	to	4:30 PM	58	60	83	0	106	322	10	0	8	93	59	1	43	336	99	0
4:30 PM	to	4:45 PM	83	66	74	1	101	354	7	0	13	111	70	0	39	332	135	0
4:45 PM	to	5:00 PM	66	61	78	0	116	313	11	0	21	100	65	0	43	410	97	0
5:00 PM	to	5:15 PM	93	71	88	0	131	336	6	0	31	131	64	2	45	434	127	0
5:15 PM	to	5:30 PM	82	62	85	0	145	330	9	0	27	151	61	0	54	381	104	0
5:30 PM	to	5:45 PM	73	72	89	0	128	352	12	0	12	116	58	0	55	372	127	0
5:45 PM	to	6:00 PM	84	67	69	0	147	302	6	0	17	110	60	0	55	371	133	0
6:00 PM	to	6:15 PM	98	53	94	1	112	330	18	0	12	115	53	0	54	330	125	0
6:15 PM	to	6:30 PM	91	70	82	0	112	305	12	0	9	112	46	0	36	301	119	0
6:30 PM	to	6:45 PM	80	46	70	0	84	285	13	0	11	86	38	0	44	291	129	0
6:45 PM	to	7:00 PM	68	40	55	0	97	270	6	0	12	69	36	1	64	319	127	0

PEAK HOURS			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Lottsford Road**				**MD 202**				**Lottsford Road**				**MD 202**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:30 AM	to	8:30 AM	862	449	430	1	395	1814	70	0	20	242	124	2	83	1006	212	0
PM INTERSECTION PEAK HOUR																		
5:00 PM	to	6:00 PM	332	272	331	0	551	1320	33	0	87	508	243	2	209	1558	491	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	862	449	430	1	395	1814	70	0	20	242	124	2	83	1006	212	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	332	272	331	0	551	1320	33	0	87	508	243	2	209	1558	491	0

PEAK HOUR FACTORS	Southbound				Westbound				Northbound				Eastbound			
	Lottsford Road				**MD 202**				**Lottsford Road**				**MD 202**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.87	0.94	0.92	**0.90**	0.85	0.91	0.88	**0.90**	0.63	0.81	0.89	**0.85**	0.86	0.84	0.90	**0.87**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.89	0.94	0.93	**0.93**	0.94	0.94	0.69	**0.97**	0.70	0.84	0.95	**0.88**	0.95	0.90	0.92	**0.93**

Overall AM PEAK HOUR FACTOR = **0.91** **Overall PM PEAK HOUR FACTOR** = **0.95**

AM Period Intersection Volume: 14544 **PM Period Intersection Volume:** 16296

Gorove/Slade Associates

Project Name :	FBI Headquarters Relocation
Project # :	2709-013
Location	Landover, Maryland
Data Source:	Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection:			**Landover Road & Technology Way (Signalized)**															
AM PEAK																		
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Landover Road**								**Landover Road**				**Technology Way**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	17	128	0	0	0	0	0	0	0	298	14	0	6	0	6	0
6:45 AM	to	7:00 AM	28	163	0	0	0	0	0	0	0	455	17	0	4	0	5	0
7:00 AM	to	7:15 AM	22	164	0	0	0	0	0	0	0	489	14	0	7	0	5	0
Location																		
AM PEAK																		
Direction:																		
Roadway:																		
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	17	128	0	0	0	0	0	0	0	298	14	0	6	0	6	0
6:45 AM	to	7:00 AM	28	163	0	0	0	0	0	0	0	455	17	0	4	0	5	0
7:00 AM	to	7:15 AM	22	164	0	0	0	0	0	0	0	489	14	0	7	0	5	0
7:15 AM	to	7:30 AM	28	192	0	0	0	0	0	0	0	517	18	0	8	0	7	0
7:30 AM	to	7:45 AM	38	261	0	0	0	0	0	0	0	577	20	0	4	0	6	0
7:45 AM	to	8:00 AM	51	316	0	0	0	0	0	0	0	619	41	0	8	0	10	0
8:00 AM	to	8:15 AM	83	287	0	0	0	0	0	0	0	489	51	0	10	0	18	0
8:15 AM	to	8:30 AM	106	281	0	0	0	0	0	0	0	505	46	0	6	0	21	0
8:30 AM	to	8:45 AM	79	346	0	0	0	0	0	0	0	426	51	0	15	0	20	0
8:45 AM	to	9:00 AM	117	324	0	0	0	0	0	0	0	395	50	0	14	0	24	0
9:00 AM	to	9:15 AM	104	278	0	0	0	0	0	0	0	374	34	0	20	0	29	0
9:15 AM	to	9:30 AM	95	243	0	2	0	0	0	0	0	308	49	0	23	0	30	0
PM PEAK																		
Direction:																		
Roadway:																		
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	43	369	0	0	0	0	0	0	0	383	34	0	44	0	86	0
4:15 PM	to	4:30 PM	60	387	0	0	0	0	0	0	0	379	30	0	29	0	63	0
4:30 PM	to	4:45 PM	38	420	0	0	0	0	0	0	0	392	26	0	43	0	70	0
4:45 PM	to	5:00 PM	48	485	0	0	0	0	0	0	0	391	28	0	40	0	63	0
5:00 PM	to	5:15 PM	39	518	0	0	0	0	0	0	0	376	26	0	62	0	100	0
5:15 PM	to	5:30 PM	35	499	0	0	0	0	0	0	0	372	12	0	55	0	106	0
5:30 PM	to	5:45 PM	37	474	0	0	0	0	0	0	0	391	18	0	56	0	91	0
5:45 PM	to	6:00 PM	44	514	0	0	0	0	0	0	0	391	19	0	29	0	62	0
6:00 PM	to	6:15 PM	29	455	0	0	0	0	0	0	0	404	19	0	28	0	66	0
6:15 PM	to	6:30 PM	29	428	0	0	0	0	0	0	0	394	18	0	23	0	44	0
6:30 PM	to	6:45 PM	30	364	0	0	0	0	0	0	0	333	10	0	25	0	51	0
6:45 PM	to	7:00 PM	27	394	0	0	0	0	0	0	0	323	15	0	16	0	36	0
PEAK HOURS																		
Direction:																		
Roadway:			Southbound				Westbound				Northbound				Eastbound			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR			**Landover Road**								**Landover Road**				**Technology Way**			
7:45 AM	to	8:45 AM	319	1230	0	0	0	0	0	0	0	2039	189	0	39	0	69	0
AM PEAK HOUR																		
PM INTERSECTION PEAK HOUR																		
PM PEAK HOUR																		
5:00 PM	to	6:00 PM	155	2005	0	0	0	0	0	0	0	1530	75	0	202	0	359	0
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	278	1145	0	0	0	0	0	0	0	2190	158	0	28	0	54	0

Overall AM Peak Hour Factor

AM Period Intersection Volume: 9913

Overall PM Peak Hour Factor

PM Period Intersection Volume: 11886

Gorove/Slade Associates

Project Name :	LBG-Landover Site
Project # :	2079-013
Location	MD 202/Arena Dr/Lake Arbor Way
Data Source:	SHA

Date of Counts: Wednesday, November 5, 2014

Intersection: **Landover Road & Arena Drive/Lake Arbor Way (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**MD 202**				**Lake Arbor Way**				**MD 202**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	9	113	14	0	37	48	7	0	18	301	30	0	26	16	9	1
6:45 AM	to	7:00 AM	23	147	13	0	50	66	16	0	16	392	47	0	31	15	18	1
7:00 AM	to	7:15 AM	22	133	23	0	62	74	12	0	15	418	59	0	41	17	25	1
7:15 AM	to	7:30 AM	14	162	20	0	75	107	16	0	34	402	63	1	54	36	30	3
7:30 AM	to	7:45 AM	17	224	41	0	79	103	25	0	27	482	101	0	45	49	31	2
7:45 AM	to	8:00 AM	32	277	27	0	79	111	20	0	10	495	83	0	44	27	33	5
8:00 AM	to	8:15 AM	39	251	18	0	47	62	12	0	18	438	73	0	52	33	33	2
8:15 AM	to	8:30 AM	27	251	38	0	62	49	8	0	14	425	70	0	42	14	44	5
8:30 AM	to	8:45 AM	21	278	52	0	71	58	11	0	19	348	63	0	54	23	33	0
8:45 AM	to	9:00 AM	22	289	31	0	58	62	21	0	10	336	47	0	52	29	28	0
9:00 AM	to	9:15 AM	25	242	21	0	48	54	18	0	8	311	74	0	63	23	36	0
9:15 AM	to	9:30 AM	34	232	26	0	50	43	9	0	9	267	57	0	48	31	28	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**MD 202**				**Lake Arbor Way**				**MD 202**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	49	313	54	0	44	72	15	0	14	287	55	0	133	56	68	2
4:15 PM	to	4:30 PM	44	311	57	0	65	56	16	0	17	287	62	0	117	54	55	4
4:30 PM	to	4:45 PM	53	334	63	0	39	64	14	0	20	309	62	0	179	51	58	5
4:45 PM	to	5:00 PM	52	395	65	0	59	63	11	0	23	307	51	0	186	50	57	2
5:00 PM	to	5:15 PM	55	407	74	0	44	45	14	1	18	290	66	0	187	63	56	6
5:15 PM	to	5:30 PM	46	451	63	0	50	62	21	0	18	233	61	0	193	82	66	1
5:30 PM	to	5:45 PM	33	406	68	0	60	73	15	0	19	252	55	0	177	64	60	1
5:45 PM	to	6:00 PM	53	386	72	0	64	63	15	0	26	262	83	0	188	82	66	2
6:00 PM	to	6:15 PM	67	401	64	0	54	56	25	0	22	251	62	0	196	96	51	0
6:15 PM	to	6:30 PM	37	397	62	0	55	51	15	0	30	227	48	0	175	78	60	3
6:30 PM	to	6:45 PM	63	324	76	0	53	54	14	0	23	170	51	0	138	73	56	1
6:45 PM	to	7:00 PM	44	292	61	0	40	56	15	0	19	151	38	0	150	63	54	1

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**MD 202**				**Lake Arbor Way**				**MD 202**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:30 AM	to	8:30 AM	115	1003	124	0	267	325	65	0	69	1840	327	0	183	123	141	14
PM INTERSECTION PEAK HOUR																		
5:15 PM	to	6:15 PM	199	1644	267	0	228	254	76	0	85	998	261	0	754	324	243	4
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	115	1003	124	0	267	325	65	0	69	1840	327	0	183	123	141	14
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	187	1650	277	0	218	243	65	1	81	1037	265	0	745	291	248	10

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	MD 202				**Lake Arbor Way**				**MD 202**				**Arena Drive**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.74	0.91	0.76	**0.92**	0.84	0.73	0.65	**0.78**	0.64	0.93	0.81	**0.92**	0.88	0.63	0.80	**0.89**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.85	0.91	0.94	**0.94**	0.85	0.83	0.77	**0.89**	0.78	0.89	0.80	**0.92**	0.97	0.89	0.94	**0.94**

Overall AM PEAK HOUR FACTOR = **0.93** **Overall PM PEAK HOUR FACTOR** = **0.98**

AM Period Intersection Volume: 11731 **PM Period Intersection Volume:** 14831

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Martin Luther King Jr Highway & Ardwick Ardmore Road (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**				**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	29	27	15	1	48	195	18	0	10	51	22	1	15	123	51	0
6:45 AM	to	7:00 AM	57	27	18	0	53	208	9	0	9	56	43	0	13	169	66	0
7:00 AM	to	7:15 AM	80	29	9	1	44	230	23	0	13	83	45	0	38	141	74	0
7:15 AM	to	7:30 AM	49	43	16	1	54	255	18	0	20	88	70	0	47	164	78	0
7:30 AM	to	7:45 AM	88	71	15	1	59	298	39	1	16	97	51	0	53	251	90	0
7:45 AM	to	8:00 AM	80	65	21	1	94	296	34	0	17	114	61	0	38	252	107	0
8:00 AM	to	8:15 AM	64	51	16	0	85	259	43	0	32	137	30	0	32	264	107	1
8:15 AM	to	8:30 AM	51	46	15	0	60	221	45	0	32	119	32	0	20	262	95	0
8:30 AM	to	8:45 AM	83	34	29	0	63	214	26	0	21	98	21	0	21	231	100	0
8:45 AM	to	9:00 AM	127	56	37	2	52	192	17	1	39	75	27	0	24	177	74	0
9:00 AM	to	9:15 AM	143	34	27	0	54	166	31	1	25	82	24	0	14	122	62	0
9:15 AM	to	9:30 AM	82	44	28	1	47	145	18	0	25	61	17	0	18	132	55	1

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**				**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	72	61	38	0	29	159	27	0	26	56	20	0	31	204	52	0
4:15 PM	to	4:30 PM	71	68	48	0	29	198	31	0	29	57	22	0	34	204	64	0
4:30 PM	to	4:45 PM	78	76	42	0	19	160	33	0	45	49	10	2	38	212	53	0
4:45 PM	to	5:00 PM	103	66	39	0	29	219	33	0	33	56	20	0	57	250	56	0
5:00 PM	to	5:15 PM	79	101	65	0	11	143	29	0	41	56	23	0	49	277	60	1
5:15 PM	to	5:30 PM	111	97	45	1	25	165	36	0	22	72	19	0	64	217	61	0
5:30 PM	to	5:45 PM	89	107	49	0	26	197	53	0	33	102	23	1	55	280	65	0

Location

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**				**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	29	27	15	1	48	195	18	0	10	51	22	1	15	123	51	0
6:45 AM	to	7:00 AM	57	27	18	0	53	208	9	0	9	56	43	0	13	169	66	0
7:00 AM	to	7:15 AM	80	29	9	1	44	230	23	0	13	83	45	0	38	141	74	0
7:15 AM	to	7:30 AM	49	43	16	1	54	255	18	0	20	88	70	0	47	164	78	0
7:30 AM	to	7:45 AM	88	71	15	1	59	298	39	1	16	97	51	0	53	251	90	0
7:45 AM	to	8:00 AM	80	65	21	1	94	296	34	0	17	114	61	0	38	252	107	0
8:00 AM	to	8:15 AM	64	51	16	0	85	259	43	0	32	137	30	0	32	264	107	1
8:15 AM	to	8:30 AM	51	46	15	0	60	221	45	0	32	119	32	0	20	262	95	0
8:30 AM	to	8:45 AM	83	34	29	0	63	214	26	0	21	98	21	0	21	231	100	0
8:45 AM	to	9:00 AM	127	56	37	2	52	192	17	1	39	75	27	0	24	177	74	0
9:00 AM	to	9:15 AM	143	34	27	0	54	166	31	1	25	82	24	0	14	122	62	0
9:15 AM	to	9:30 AM	82	44	28	1	47	145	18	0	25	61	17	0	18	132	55	1

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**				**Ardwick Ardmore Road**				**Martin Luther King Jr Hwy**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	72	61	38	0	29	159	27	0	26	56	20	0	31	204	52	0
4:15 PM	to	4:30 PM	71	68	48	0	29	198	31	0	29	57	22	0	34	204	64	0
4:30 PM	to	4:45 PM	78	76	42	0	19	160	33	0	45	49	10	2	38	212	53	0
4:45 PM	to	5:00 PM	103	66	39	0	29	219	33	0	33	56	20	0	57	250	56	0
5:00 PM	to	5:15 PM	79	101	65	0	11	143	29	0	41	56	23	0	49	277	60	1
5:15 PM	to	5:30 PM	111	97	45	1	25	165	36	0	22	72	19	0	64	217	61	0
5:30 PM	to	5:45 PM	89	107	49	0	26	197	53	0	33	102	23	1	55	280	65	0

AM PEAK HOUR

PM PEAK HOUR

Overall AM PEAK HOUR FACTOR

AM Period Intersection Volume: 1070

Overall PM PEAK HOUR FACTOR

PM Period Intersection Volume: 1024

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Brightseat Road & Ardwick Ardmore Road (TWSC)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd/Watkins Ave.**				**Ardwick Ardmore Road**				**Brightseat Road**				**Ardwick Ardmore Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	3	0	0	0	0	47	7	0	10	0	39	1	26	17	2	0
6:45 AM	to	7:00 AM	2	0	0	0	0	63	18	0	12	0	36	0	19	23	0	0
7:00 AM	to	7:15 AM	0	2	0	0	0	99	17	0	21	0	40	0	18	38	2	0
7:15 AM	to	7:30 AM	2	0	0	0	0	117	28	0	37	0	58	0	32	64	1	0
7:30 AM	to	7:45 AM	1	0	0	0	0	106	32	0	35	0	65	1	48	77	6	0
7:45 AM	to	8:00 AM	0	0	0	0	0	130	48	1	32	0	71	0	59	49	3	1
8:00 AM	to	8:15 AM	4	0	0	0	2	81	27	1	36	0	103	0	66	36	4	0
8:15 AM	to	8:30 AM	2	2	0	0	1	82	15	0	28	0	94	0	51	31	2	0
8:30 AM	to	8:45 AM	0	1	0	0	1	60	20	0	22	0	71	0	43	34	1	0
8:45 AM	to	9:00 AM	0	1	2	0	0	55	18	1	9	0	71	0	49	34	3	0
9:00 AM	to	9:15 AM	0	0	0	0	0	43	20	0	7	0	61	0	38	21	1	0
9:15 AM	to	9:30 AM	1	0	0	0	0	40	14	1	11	0	53	4	36	34	0	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd/Watkins Ave.**				**Ardwick Ardmore Road**				**Brightseat Road**				**Ardwick Ardmore Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	6	1	0	0	0	46	14	0	27	1	48	2	59	61	2	0
4:15 PM	to	4:30 PM	5	0	0	0	0	28	16	0	17	0	55	2	47	68	1	0
4:30 PM	to	4:45 PM	4	0	0	2	0	38	18	1	21	0	61	0	63	80	1	1
4:45 PM	to	5:00 PM	3	0	0	0	0	45	15	0	25	0	62	3	57	93	1	0
5:00 PM	to	5:15 PM	3	0	0	0	0	46	20	0	33	2	55	2	71	96	1	0
5:15 PM	to	5:30 PM	4	1	1	0	0	43	27	0	31	0	53	0	77	90	2	0
5:30 PM	to	5:45 PM	1	0	0	0	0	45	25	0	33	0	54	0	99	97	0	0
5:45 PM	to	6:00 PM	0	0	0	0	0	68	14	0	31	1	54	1	89	95	3	0
6:00 PM	to	6:15 PM	2	0	0	0	0	61	26	0	26	0	48	1	82	105	2	0
6:15 PM	to	6:30 PM	1	0	0	0	1	43	31	0	25	1	58	3	73	72	1	0
6:30 PM	to	6:45 PM	3	0	0	0	0	40	25	0	23	0	58	0	60	80	0	0
6:45 PM	to	7:00 PM	0	0	0	0	0	46	23	0	23	0	54	1	66	77	1	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Rd/Watkins Ave.**				**Ardwick Ardmore Road**				**Brightseat Road**				**Ardwick Ardmore Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:15 AM	to	8:15 AM	7	0	0	0	2	434	135	2	140	0	297	1	205	226	14	1
PM INTERSECTION PEAK HOUR																		
5:15 PM	to	6:15 PM	7	1	1	0	0	217	92	0	121	1	209	2	347	387	7	0
AM SYSTEM PEAK HOUR													13					
7:30 AM	to	8:30 AM	7	2	0	0	3	399	122	2	131	0	333	1	224	193	15	1
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	8	1	1	0	0	202	86	0	128	3	216	3	336	378	6	0

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Brightseat Rd/Watkins Ave.				**Ardwick Ardmore Road**				**Brightseat Road**				**Ardwick Ardmore Road**			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.44	0.25	0.00	**0.56**	0.38	0.77	0.64	**0.74**	0.91	0.00	0.81	**0.83**	0.85	0.63	0.63	**0.82**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.50	0.25	0.25	**0.42**	0.00	0.74	0.80	**0.88**	0.97	0.38	0.98	**0.96**	0.85	0.97	0.50	**0.92**

Overall AM PEAK HOUR FACTOR = **0.91** **Overall PM PEAK HOUR FACTOR** = **0.96**

AM Period Intersection Volume: 3204 **PM Period Intersection Volume:** 3691

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Brightseat Road & Glenarden Parkway (Signalized)**

AM PEAK																	
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:	**Brightseat Road**				**Glenarden Parkway**				**Brightseat Road**				**Glenarden Parkway**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM		0	24	2	0	10	8	8	0	2	41	13	0	10	1	1	0
6:45 AM	to	7:00 AM		5	29	3	0	3	11	7	0	3	53	9	0	12	6	0	0
7:00 AM	to	7:15 AM		2	44	0	0	4	12	12	1	6	61	17	1	10	3	2	0
7:15 AM	to	7:30 AM		1	60	3	0	6	19	14	1	7	99	13	0	20	7	2	1
7:30 AM	to	7:45 AM		6	74	0	0	5	21	11	0	8	95	20	0	16	11	3	0
7:45 AM	to	8:00 AM		11	94	2	1	2	8	14	1	6	155	13	0	24	5	2	0
8:00 AM	to	8:15 AM		6	90	3	1	4	11	7	1	4	136	14	1	9	1	4	0
8:15 AM	to	8:30 AM		2	78	1	0	6	8	12	1	5	121	20	1	20	4	2	0
8:30 AM	to	8:45 AM		6	58	6	1	3	3	11	2	8	101	11	1	16	5	1	0
8:45 AM	to	9:00 AM		4	61	3	0	7	8	5	0	5	83	19	0	15	7	0	0
9:00 AM	to	9:15 AM		1	59	2	0	3	5	13	0	8	66	20	0	19	6	0	0
9:15 AM	to	9:30 AM		2	53	1	1	3	10	9	1	8	70	14	0	20	4	2	0
PM PEAK																			
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:	**Brightseat Road**				**Glenarden Parkway**				**Brightseat Road**				**Glenarden Parkway**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM		5	69	3	1	5	8	12	1	11	65	13	0	19	2	2	0
4:15 PM	to	4:30 PM		6	60	1	0	3	6	1	0	10	76	18	0	19	13	0	0
4:30 PM	to	4:45 PM		4	68	7	0	4	6	7	1	11	85	27	0	30	10	4	0
4:45 PM	to	5:00 PM		3	63	3	0	3	8	8	0	16	89	17	0	13	8	3	0
5:00 PM	to	5:15 PM		4	94	4	1	5	14	11	2	15	90	18	0	29	11	2	0
5:15 PM	to	5:30 PM		5	90	7	1	3	7	6	0	15	86	18	0	34	15	3	1
5:30 PM	to	5:45 PM		5	129	8	0	2	6	9	1	10	87	20	0	36	12	6	2
5:45 PM	to	6:00 PM		3	93	3	0	5	7	2	6	14	88	24	0	21	19	1	1
6:00 PM	to	6:15 PM		5	106	3	0	3	10	9	0	10	67	12	0	22	9	5	0
6:15 PM	to	6:30 PM		5	91	4	0	5	4	11	0	8	80	19	0	25	11	6	1
6:30 PM	to	6:45 PM		4	84	2	0	5	6	10	0	16	86	27	0	25	9	4	0
6:45 PM	to	7:00 PM		2	63	2	0	6	5	12	0	12	91	15	0	36	9	2	1
PEAK HOURS																			
			Direction:	Southbound				Westbound				Northbound				Eastbound			
			Roadway:	**Brightseat Road**				**Glenarden Parkway**				**Brightseat Road**				**Glenarden Parkway**			
			Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																			
7:30 AM	to	8:30 AM		25	336	6	2	17	48	44	3	23	507	67	2	69	21	11	0
PM INTERSECTION PEAK HOUR																			
5:00 PM	to	6:00 PM		17	406	22	2	15	34	28	9	54	351	80	0	120	57	12	4
AM SYSTEM PEAK HOUR														13					
7:30 AM	to	8:30 AM		25	336	6	2	17	48	44	3	23	507	67	2	69	21	11	0
PM SYSTEM PEAK HOUR																			
5:00 PM	to	6:00 PM		17	406	22	2	15	34	28	9	54	351	80	0	120	57	12	4

PEAK HOUR FACTORS		Southbound				Westbound				Northbound				Eastbound			
		Brightseat Road				**Glenarden Parkway**				**Brightseat Road**				**Glenarden Parkway**			
AM Peak Hour		Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR		0.57	0.89	0.50	**0.86**	0.71	0.57	0.79	**0.74**	0.72	0.82	0.84	**0.86**	0.72	0.48	0.69	**0.81**
		Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR		0.85	0.79	0.69	**0.78**	0.75	0.61	0.64	**0.64**	0.90	0.98	0.83	**0.96**	0.83	0.75	0.50	**0.88**

Overall AM PEAK HOUR FACTOR = **0.87** **Overall PM PEAK HOUR FACTOR** = **0.91**

AM Period Intersection Volume: 2703 **PM Period Intersection Volume:** 3183

Gorove/Slade Associates

Project Name :	LBG-Landover Site
Project # :	2079-013
Location	MD 202/Henson Ave
Data Source:	SHA

Date of Counts: Thursday, April 10, 2014

Intersection: Brightseat Road & Evarts Street (Signalized)

			Southbound				Westbound				Northbound				Eastbound			
AM PEAK			**Brightseat Road**				**Evarts Street**				**Brightseat Road**				**Evarts Street**			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	44	0	1	0	0	0	0	0	37	0	0	0	0	0	0
Location																		
AM PEAK																		
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	44	0	1	0	0	0	0	0	37	0	0	0	0	0	0
6:45 AM	to	7:00 AM	0	46	0	2	0	0	1	0	1	62	0	0	0	0	0	0
7:00 AM	to	7:15 AM	0	74	0	1	0	0	0	0	1	72	0	0	0	0	0	0
7:15 AM	to	7:30 AM	0	59	0	0	0	0	2	0	1	91	1	0	0	0	0	0
7:30 AM	to	7:45 AM	0	95	0	1	0	0	0	0	0	95	0	0	0	0	0	0
7:45 AM	to	8:00 AM	0	92	0	2	0	0	0	0	1	117	1	0	0	0	0	0
8:00 AM	to	8:15 AM	1	90	0	0	0	0	1	0	0	117	2	0	0	0	0	0
8:15 AM	to	8:30 AM	0	80	0	0	0	0	0	0	1	89	6	0	1	0	0	1
8:30 AM	to	8:45 AM	0	83	0	0	0	0	1	0	0	84	2	0	0	0	0	2
8:45 AM	to	9:00 AM	1	82	0	1	0	0	0	0	0	81	2	0	0	0	0	0
9:00 AM	to	9:15 AM	0	86	0	2	0	0	0	0	1	83	1	0	0	0	0	0
9:15 AM	to	9:30 AM	0	75	1	0	0	0	1	0	1	88	2	0	0	0	1	0
PM PEAK																		
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	1	112	0	0	1	0	1	0	1	109	7	0	0	0	1	0
4:15 PM	to	4:30 PM	1	84	1	1	1	0	0	0	1	117	8	0	0	0	0	0
4:30 PM	to	4:45 PM	1	107	0	1	0	0	1	0	0	137	6	0	0	0	2	0
4:45 PM	to	5:00 PM	1	103	0	2	0	0	0	0	1	153	5	0	0	0	0	0
5:00 PM	to	5:15 PM	0	135	0	4	0	0	1	0	1	120	12	0	0	0	1	0
5:15 PM	to	5:30 PM	1	156	0	0	0	0	1	0	0	120	6	0	0	0	3	0
5:30 PM	to	5:45 PM	0	141	0	4	0	0	1	0	2	139	2	0	0	0	2	0
5:45 PM	to	6:00 PM	1	128	1	2	0	0	2	0	0	152	3	0	0	0	1	0
6:00 PM	to	6:15 PM	0	149	0	3	0	0	0	0	0	170	8	0	0	0	2	0
6:15 PM	to	6:30 PM	2	129	2	1	0	0	2	0	1	158	5	0	0	0	2	0
6:30 PM	to	6:45 PM	2	118	1	2	0	0	1	0	0	168	8	4	0	0	1	9
6:45 PM	to	7:00 PM	0	104	1	2	0	0	0	0	0	156	8	0	0	0	2	0
PEAK HOURS																		
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR			Southbound				Westbound				Northbound				Eastbound			
7:30 AM	to	8:30 AM	1	357	0	3	0	0	1	0	2	418	9	0	1	0	0	1
PM INTERSECTION PEAK HOUR			**Brightseat Road**				**Evarts Street**				**Brightseat Road**				**Evarts Street**			
5:45 PM	to	6:45 PM	5	524	4	8	0	0	5	0	1	648	24	4	0	0	6	9
AM PEAK HOUR																		
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	1	357	0	3	0	0	1	0	2	418	9	0	1	0	0	1
PM PEAK HOUR																		
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	2	560	1	10	0	0	5	0	3	630	23	0	0	0	7	0

Overall AM Peak Hour Intersection Volume: 1957 **AM Peak Hour Factor** 0.95

Overall PM Peak Hour Intersection Volume: 3295 **PM Peak Hour Factor** 0.93

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) (TWSC)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Brightseat Road				**Site Entrance**				**Brightseat Road**				**Apartment Driveway**			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	57	1	0	0	0	0	0	0	53	1	0	6	0	2	0
6:45 AM	to	7:00 AM	0	66	1	0	0	0	0	0	0	73	1	0	7	0	0	0
7:00 AM	to	7:15 AM	0	81	0	0	0	0	0	1	0	80	2	0	3	0	6	0
7:15 AM	to	7:30 AM	2	108	0	2	0	0	0	0	0	121	1	1	8	0	1	0
7:30 AM	to	7:45 AM	1	120	0	1	0	0	0	0	1	115	0	0	14	0	3	0
7:45 AM	to	8:00 AM	1	141	1	2	0	0	1	0	1	166	1	0	11	0	5	0
8:00 AM	to	8:15 AM	0	111	0	0	0	0	0	1	1	169	4	0	8	0	5	0
8:15 AM	to	8:30 AM	0	116	1	0	0	0	0	0	2	144	4	0	6	0	5	0
8:30 AM	to	8:45 AM	0	101	0	0	0	0	0	0	1	111	3	0	5	0	2	0
8:45 AM	to	9:00 AM	0	90	0	3	0	0	3	0	0	112	2	1	9	0	1	0
9:00 AM	to	9:15 AM	1	88	0	8	0	0	5	0	3	100	3	0	10	0	2	0
9:15 AM	to	9:30 AM	0	102	0	0	0	0	0	0	0	104	1	0	6	0	1	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
			Brightseat Road				**Site Entrance**				**Brightseat Road**				**Apartment Driveway**			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	0	121	0	4	0	0	2	2	5	111	1	0	4	0	4	0
4:15 PM	to	4:30 PM	0	95	0	2	0	0	3	0	0	128	0	0	4	1	1	0
4:30 PM	to	4:45 PM	0	101	0	1	0	0	1	0	1	138	2	1	8	0	2	0
4:45 PM	to	5:00 PM	0	97	0	0	0	0	0	0	0	143	1	1	7	0	3	0
5:00 PM	to	5:15 PM	0	132	1	5	0	0	3	0	2	165	5	2	11	0	3	0
5:15 PM	to	5:30 PM	0	135	0	1	0	0	1	0	2	137	1	0	6	0	3	0
5:30 PM	to	5:45 PM	1	167	0	3	0	0	2	0	2	150	0	0	6	0	4	0
5:45 PM	to	6:00 PM	1	122	0	2	0	0	2	0	2	135	3	0	7	0	4	0
6:00 PM	to	6:15 PM	0	147	0	1	0	0	1	0	0	103	2	0	4	1	3	0
6:15 PM	to	6:30 PM	3	140	0	0	0	0	0	0	0	140	0	0	8	0	2	0
6:30 PM	to	6:45 PM	1	109	0	1	0	0	0	0	0	156	1	0	7	0	0	0
6:45 PM	to	7:00 PM	0	104	1	0	0	0	0	0	1	139	1	0	3	0	1	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
			Brightseat Road				**Site Entrance**				**Brightseat Road**				**Apartment Driveway**			
			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:30 AM	to	8:30 AM	2	488	2	3	0	0	1	1	5	594	9	0	39	0	18	0
PM INTERSECTION PEAK HOUR																		
5:00 PM	to	6:00 PM	2	556	1	11	0	0	8	0	8	587	9	2	30	0	14	0
AM SYSTEM PEAK HOUR													13					
7:30 AM	to	8:30 AM	2	488	2	3	0	0	1	1	5	594	9	0	39	0	18	0
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	2	556	1	11	0	0	8	0	8	587	9	2	30	0	14	0

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Brightseat Road				**Site Entrance**				**Brightseat Road**				**Apartment Driveway**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.50	0.87	0.50	**0.86**	0.00	0.00	0.25	**0.25**	0.63	0.88	0.56	**0.87**	0.70	0.00	0.90	**0.84**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.50	0.83	0.25	**0.83**	0.00	0.00	0.67	**0.67**	1.00	0.89	0.45	**0.88**	0.68	0.00	0.88	**0.79**

Overall AM PEAK HOUR FACTOR = **0.88** **Overall PM PEAK HOUR FACTOR** = **0.91**

AM Period Intersection Volume: 2705 **PM Period Intersection Volume:** 3277

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 5, 2014

Intersection: **Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Brightseat Road**				**Redskins Road**				**Sheriff Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	28	12	8	0	6	13	1	0	2	27	5	0	8	5	23	0
6:45 AM	to	7:00 AM	34	19	14	1	14	22	1	1	1	20	14	0	25	8	14	0
7:00 AM	to	7:15 AM	47	26	3	0	8	19	0	0	0	38	16	0	19	12	22	0
7:15 AM	to	7:30 AM	40	29	13	0	15	27	1	0	0	45	13	0	14	13	19	0

Location

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Brightseat Road**				**Redskins Road**				**Sheriff Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	28	12	8	0	6	13	1	0	2	27	5	0	8	5	23	0
6:45 AM	to	7:00 AM	34	19	14	1	14	22	1	1	1	20	14	0	25	8	14	0
7:00 AM	to	7:15 AM	47	26	3	0	8	19	0	0	0	38	16	0	19	12	22	0
7:15 AM	to	7:30 AM	40	29	13	0	15	27	1	0	0	45	13	0	14	13	19	0
7:30 AM	to	7:45 AM	47	24	13	0	21	24	0	0	2	42	11	0	17	21	34	0
7:45 AM	to	8:00 AM	83	32	28	0	22	37	0	1	4	56	14	0	23	23	40	0
8:00 AM	to	8:15 AM	68	40	22	0	35	42	0	0	0	67	22	0	19	20	44	0
8:15 AM	to	8:30 AM	94	50	14	0	55	42	1	0	1	82	20	0	11	34	61	0
8:30 AM	to	8:45 AM	78	59	28	0	47	64	0	0	1	74	25	0	19	44	72	0
8:45 AM	to	9:00 AM	96	87	36	0	63	55	0	0	2	104	45	0	21	41	61	0
9:00 AM	to	9:15 AM	82	59	47	0	66	55	0	0	1	105	24	1	15	40	56	0
9:15 AM	to	9:30 AM	85	49	43	0	36	53	0	0	2	94	24	0	8	40	66	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Brightseat Road**				**Redskins Road**				**Sheriff Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	52	61	32	0	43	37	0	1	3	63	13	0	32	41	48	0
4:15 PM	to	4:30 PM	53	62	30	0	35	33	1	0	1	53	12	0	20	37	68	0
4:30 PM	to	4:45 PM	69	77	48	0	62	50	2	0	2	41	14	0	28	47	46	0
4:45 PM	to	5:00 PM	61	91	35	0	30	38	0	1	2	50	16	0	32	54	63	1
5:00 PM	to	5:15 PM	54	101	42	0	57	54	0	0	3	61	11	0	37	69	68	0
5:15 PM	to	5:30 PM	65	85	32	1	62	47	3	0	4	59	18	0	24	52	77	1
5:30 PM	to	5:45 PM	60	80	31	2	50	52	1	0	1	69	15	0	42	63	73	0
5:45 PM	to	6:00 PM	69	84	39	0	69	64	2	0	5	60	25	0	27	56	56	1
6:00 PM	to	6:15 PM	58	103	55	0	80	72	2	0	4	85	29	0	25	57	68	0
6:15 PM	to	6:30 PM	73	134	40	0	51	55	2	0	0	77	22	0	17	66	62	0
6:30 PM	to	6:45 PM	90	110	63	0	49	59	1	0	3	63	16	0	35	76	85	0
6:45 PM	to	7:00 PM	68	108	44	0	55	70	7	0	4	60	28	0	18	72	82	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Brightseat Road**				**Redskins Road**				**Sheriff Road**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
8:30 AM	to	9:30 AM	341	254	154	0	212	227	0	0	6	377	118	1	63	165	255	0
PM INTERSECTION PEAK HOUR																		
PM PEAK HOUR																		
6:00 PM	to	7:00 PM	290	431	197	0	249	250	7	0	12	285	92	0	184	255	271	1

Overall AM PEAK HOUR FACTOR **Overall PM PEAK HOUR FACTOR**

AM SIGNAL PEAK HOUR **AM Period Intersection Volume:** 4397 **PM Period Intersection Volume:** 6439 13

Gorove/Slade Associates

Project Name :	LBG-Landover Site
Project # :	2079-013
Location	MD 202/US Route 50
Data Source:	SHA

Date of Counts: Wednesday, November 5, 2014

Intersection: **Brightseat Road & Arena Drive (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Arena Drive**				**Brightseat Road**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	18	44	0	45	16	13	0	17	27	3	0	0	68	1	0
6:45 AM	to	7:00 AM	0	35	41	1	67	40	11	0	22	20	3	0	0	68	3	2
7:00 AM	to	7:15 AM	0	35	23	1	58	36	16	0	18	18	4	0	1	62	0	0
7:15 AM	to	7:30 AM	1	35	39	0	76	43	21	0	21	31	4	0	0	78	2	0
7:30 AM	to	7:45 AM	1	42	56	2	79	32	27	0	35	49	13	0	8	75	0	2
7:45 AM	to	8:00 AM	0	34	50	1	61	54	34	0	30	48	6	0	7	101	2	1
8:00 AM	to	8:15 AM	3	43	48	0	69	32	31	0	36	53	2	0	11	98	2	3
8:15 AM	to	8:30 AM	1	49	44	4	66	59	45	0	42	42	7	2	8	79	1	3
8:30 AM	to	8:45 AM	0	40	39	0	71	42	50	0	22	63	6	0	4	95	4	2
8:45 AM	to	9:00 AM	0	67	43	1	50	57	91	0	54	54	7	0	17	65	4	1
9:00 AM	to	9:15 AM	3	46	38	1	54	50	64	0	56	60	10	1	12	45	2	1
9:15 AM	to	9:30 AM	1	44	34	0	54	31	55	0	30	48	4	0	7	55	0	1

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Arena Drive**				**Brightseat Road**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	2	33	73	2	63	69	60	0	70	63	3	0	6	72	3	1
4:15 PM	to	4:30 PM	0	52	53	1	37	62	56	0	61	59	5	0	6	53	0	0
4:30 PM	to	4:45 PM	2	42	74	4	68	77	44	0	62	46	8	0	4	60	5	4
4:45 PM	to	5:00 PM	1	44	72	0	74	78	58	0	51	64	10	0	8	65	2	0
5:00 PM	to	5:15 PM	1	38	61	1	58	88	56	0	66	53	11	0	5	88	3	0
5:15 PM	to	5:30 PM	3	35	72	0	70	93	65	0	50	41	7	0	1	64	3	1
5:30 PM	to	5:45 PM	1	57	72	0	59	79	48	0	36	42	7	0	13	70	5	0
5:45 PM	to	6:00 PM	6	50	69	0	87	91	43	0	55	49	9	0	7	73	3	0
6:00 PM	to	6:15 PM	4	34	77	0	62	73	48	0	52	48	5	0	5	95	2	1
6:15 PM	to	6:30 PM	0	34	66	0	72	70	30	0	42	36	7	0	2	73	6	0
6:30 PM	to	6:45 PM	2	28	63	0	51	63	35	0	45	32	8	2	3	80	6	1
6:45 PM	to	7:00 PM	4	25	50	0	54	76	38	0	42	27	5	0	2	66	4	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**Brightseat Road**				**Arena Drive**				**Brightseat Road**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
8:15 AM	to	9:15 AM	4	202	164	6	241	208	250	0	174	219	30	3	41	284	11	7
PM INTERSECTION PEAK HOUR																		
5:00 PM	to	6:00 PM	11	180	274	1	274	351	212	0	207	185	34	0	26	295	14	1
AM SYSTEM PEAK HOUR																		
7:30 AM	to	8:30 AM	5	168	198	7	275	177	137	0	143	192	28	2	34	353	5	9
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	11	180	274	1	274	351	212	0	207	185	34	0	26	295	14	1

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	Brightseat Road				**Arena Drive**				**Brightseat Road**				**Arena Drive**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.42	0.86	0.88	**0.94**	0.87	0.75	0.76	**0.87**	0.85	0.91	0.54	**0.94**	0.77	0.87	0.63	**0.88**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.46	0.79	0.95	**0.89**	0.79	0.94	0.82	**0.92**	0.78	0.87	0.77	**0.82**	0.50	0.84	0.70	**0.87**

Overall AM PEAK HOUR FACTOR = **0.97** **Overall PM PEAK HOUR FACTOR** = **0.95**

AM Period Intersection Volume: 4647 **PM Period Intersection Volume:** 5795

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 05, 2014

Intersection: **Arena Drive & I-95/I-495 Southbound Ramps (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**I-95 SB Off-Ramp**				**Arena Drive**				**I-95 SB On-Ramp**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	21	0	25	0	0	56	23	0	0	0	0	0	35	90	0	0
6:45 AM	to	7:00 AM	31	0	40	0	0	82	31	0	0	0	0	0	30	95	0	3
7:00 AM	to	7:15 AM	20	0	21	0	0	89	19	0	0	0	0	0	16	85	0	0
7:15 AM	to	7:30 AM	22	0	20	0	0	113	46	0	0	0	0	0	22	111	0	2
7:30 AM	to	7:45 AM	25	0	23	0	0	109	30	0	0	0	0	0	28	133	0	1
7:45 AM	to	8:00 AM	19	1	32	0	0	125	37	0	0	0	0	0	25	148	0	0
Location																		

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**I-95 SB Off-Ramp**				**Arena Drive**				**I-95 SB On-Ramp**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	21	0	25	0	0	56	23	0	0	0	0	0	35	90	0	0
6:45 AM	to	7:00 AM	31	0	40	0	0	82	31	0	0	0	0	0	30	95	0	3
7:00 AM	to	7:15 AM	20	0	21	0	0	89	19	0	0	0	0	0	16	85	0	0
7:15 AM	to	7:30 AM	22	0	20	0	0	113	46	0	0	0	0	0	22	111	0	2
7:30 AM	to	7:45 AM	25	0	23	0	0	109	30	0	0	0	0	0	28	133	0	1
7:45 AM	to	8:00 AM	19	1	32	0	0	125	37	0	0	0	0	0	25	148	0	0
8:00 AM	to	8:15 AM	28	1	45	0	0	100	29	0	0	0	0	0	27	151	0	4
8:15 AM	to	8:30 AM	46	0	46	0	0	123	27	0	0	0	0	0	25	129	0	5
8:30 AM	to	8:45 AM	45	0	49	0	0	130	34	0	0	0	0	0	36	117	0	0
8:45 AM	to	9:00 AM	65	0	54	0	0	108	28	0	0	0	0	1	22	127	0	0
9:00 AM	to	9:15 AM	43	0	35	0	0	117	36	0	0	0	0	0	21	110	0	0
9:15 AM	to	9:30 AM	37	0	46	0	0	94	34	0	0	0	0	0	21	96	0	1

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**I-95 SB Off-Ramp**				**Arena Drive**				**I-95 SB On-Ramp**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	33	0	61	0	0	148	65	0	0	0	0	0	37	177	0	1
4:15 PM	to	4:30 PM	31	2	68	0	0	119	91	0	0	0	0	0	32	141	0	5
4:30 PM	to	4:45 PM	35	1	58	0	0	152	82	1	0	0	0	0	30	177	0	2
4:45 PM	to	5:00 PM	46	7	91	0	0	167	60	0	0	0	0	0	24	172	0	0
5:00 PM	to	5:15 PM	42	1	78	0	0	165	75	0	0	0	0	0	43	186	0	1
5:15 PM	to	5:30 PM	44	4	74	0	0	170	88	0	0	0	0	0	31	169	0	0
5:30 PM	to	5:45 PM	51	2	87	0	0	160	63	0	0	0	0	0	31	167	0	0
5:45 PM	to	6:00 PM	30	1	81	0	0	173	59	0	0	0	0	0	30	187	0	0
6:00 PM	to	6:15 PM	29	0	66	0	0	167	62	0	0	0	0	0	29	188	0	0
6:15 PM	to	6:30 PM	24	1	59	0	0	135	47	0	0	0	0	0	30	143	0	0
6:30 PM	to	6:45 PM	24	0	59	0	0	128	56	0	0	0	0	0	28	150	0	0
6:45 PM	to	7:00 PM	36	1	48	0	0	132	45	0	0	0	0	0	26	128	0	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:																		
Roadway:			**I-95 SB Off-Ramp**				**Arena Drive**				**I-95 SB On-Ramp**				**Arena Drive**			
AM PEAK HOUR																		
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
PM PEAK HOUR																		
8:00 AM	to	9:00 AM	184	1	194	0	0	461	118	0	0	0	0	1	119	524	0	9

Overall AM PEAK HOUR FACTOR

Overall PM PEAK HOUR FACTOR

PM INTERSECTION PEAK HOUR **AM Period Intersection Volume:** 4160 **PM Period Intersection Volume:** 6230

Gorove/Slade Associates

Project Name : FBI Headquarters Relocation
Project # : 2709-013
Location Landover, Maryland
Data Source: Gorove/Slade Associates, Inc.

Date of Counts: Wednesday, November 11, 2014

Intersection: **Arena Drive & I-95/I-495 Northbound Ramps (Signalized)**

AM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**I-95 NB On-Ramp**				**Arena Drive**				**I-95 NB Off-Ramps**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
6:30 AM	to	6:45 AM	0	0	0	0	42	50	0	0	31	1	26	0	0	57	60	0
6:45 AM	to	7:00 AM	0	0	0	0	43	85	0	0	45	0	33	0	0	82	49	3
7:00 AM	to	7:15 AM	0	0	0	0	45	70	0	0	45	0	39	0	0	65	46	0
7:15 AM	to	7:30 AM	0	0	0	0	34	123	0	0	45	0	34	0	0	98	38	3
7:30 AM	to	7:45 AM	0	0	0	0	50	106	0	0	40	1	30	0	0	96	59	1
7:45 AM	to	8:00 AM	0	0	0	0	48	127	0	0	39	2	43	0	0	123	56	0
8:00 AM	to	8:15 AM	0	0	0	0	42	100	0	0	43	1	34	0	0	119	63	3
8:15 AM	to	8:30 AM	0	0	0	0	48	111	0	0	52	2	34	0	0	131	43	5
8:30 AM	to	8:45 AM	0	0	0	0	43	123	0	0	67	2	38	0	0	133	30	3
8:45 AM	to	9:00 AM	0	0	0	0	29	101	0	0	59	2	34	0	0	154	38	2
9:00 AM	to	9:15 AM	0	0	0	0	39	103	0	0	55	0	38	0	0	116	32	3
9:15 AM	to	9:30 AM	0	0	0	0	37	103	0	0	48	0	26	0	0	108	36	0

PM PEAK

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**I-95 NB On-Ramp**				**Arena Drive**				**I-95 NB Off-Ramps**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
4:00 PM	to	4:15 PM	0	0	0	0	40	187	0	0	49	2	40	0	0	195	53	1
4:15 PM	to	4:30 PM	0	0	0	0	43	164	0	0	43	0	29	0	0	165	39	6
4:30 PM	to	4:45 PM	0	0	0	0	49	227	0	1	37	0	21	0	0	188	49	0
4:45 PM	to	5:00 PM	0	0	0	0	48	204	0	0	57	2	22	0	0	226	49	1
5:00 PM	to	5:15 PM	0	0	0	0	67	224	0	0	37	1	29	0	0	202	61	1
5:15 PM	to	5:30 PM	0	0	0	0	54	208	0	0	46	2	35	0	0	213	37	1
5:30 PM	to	5:45 PM	0	0	0	0	34	191	0	0	62	0	24	0	0	214	37	1
5:45 PM	to	6:00 PM	0	0	0	0	44	185	0	0	50	0	52	0	0	228	36	3
6:00 PM	to	6:15 PM	0	0	0	0	38	190	0	0	56	0	36	0	0	212	52	0
6:15 PM	to	6:30 PM	0	0	0	0	42	145	0	0	81	2	43	0	0	170	28	0
6:30 PM	to	6:45 PM	0	0	0	0	53	150	0	0	53	1	31	0	0	181	43	0
6:45 PM	to	7:00 PM	0	0	0	0	44	145	0	0	55	2	36	0	0	146	25	0

PEAK HOURS

			Southbound				Westbound				Northbound				Eastbound			
Direction:			Southbound				Westbound				Northbound				Eastbound			
Roadway:			**I-95 NB On-Ramp**				**Arena Drive**				**I-95 NB Off-Ramps**				**Arena Drive**			
Movement:			Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																		
7:45 AM	to	8:45 AM	0	0	0	0	181	461	0	0	201	7	149	0	0	506	192	11
PM INTERSECTION PEAK HOUR																		
4:30 PM	to	5:30 PM	0	0	0	0	218	863	0	1	177	5	107	0	0	829	196	3
AM SYSTEM PEAK HOUR													13					
7:30 AM	to	8:30 AM	0	0	0	0	188	444	0	0	174	6	141	0	0	469	221	9
PM SYSTEM PEAK HOUR																		
5:00 PM	to	6:00 PM	0	0	0	0	199	808	0	0	195	3	140	0	0	857	171	6

PEAK HOUR FACTORS

	Southbound				Westbound				Northbound				Eastbound			
	I-95 NB On-Ramp				**Arena Drive**				**I-95 NB Off-Ramps**				**Arena Drive**			
AM Peak Hour	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
AM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.94	0.87	0.00	**0.90**	0.84	0.75	0.82	**0.91**	0.00	0.90	0.88	**0.95**
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach
PM PEAK HOUR	0.00	0.00	0.00	**#DIV/0!**	0.74	0.90	0.00	**0.87**	0.79	0.38	0.67	**0.83**	0.00	0.94	0.70	**0.97**

Overall AM PEAK HOUR FACTOR = **0.94** **Overall PM PEAK HOUR FACTOR** = **0.96**

AM Period Intersection Volume: 4523 **PM Period Intersection Volume:** 6661

QUALITY COUNTS REPORT
==========

Type: Volume Data
Location: Arena Dr off-ramp to NB I-95/495
Specific Lo 0 ft from
City/State: Landover MD
QCJobNo: 13210304
Direction: NB
Comments:

'==========

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week Hourly Traffic
		24-Feb-15							
12:00 AM		10				10			10
12:15 AM		6				6			6
12:30 AM		4				4			4
12:45 AM		11				11			11
1:00 AM		10				10			10
1:15 AM		19				19			19
1:30 AM		12				12			12
1:45 AM		16				16			16
2:00 AM		26				26			26
2:15 AM		26				26			26
2:30 AM		30				30			30
2:45 AM		46				46			46
3:00 AM		54				54			54
3:15 AM		67				67			67
3:30 AM		65				65			65
3:45 AM		90				90			90
4:00 AM		77				77			77
4:15 AM		103				103			103
4:30 AM		106				106			106
4:45 AM		97				97			97
5:00 AM		96				96			96
5:15 AM		108				108			108
5:30 AM		69				69			69
5:45 AM		78				78			78
6:00 AM		72				72			72
6:15 AM		87				87			87
6:30 AM		69				69			69
6:45 AM		63				63			63
7:00 AM		67				67			67
7:15 AM		71				71			71
7:30 AM		69				69			69
7:45 AM		51				51			51
8:00 AM		67				67			67
8:15 AM		56				56			56
8:30 AM		93				93			93
8:45 AM		75				75			75
9:00 AM		69				69			69
9:15 AM		69				69			69
9:30 AM		70				70			70
9:45 AM		68				68			68
10:00 AM		67				67			67
10:15 AM		76				76			76
10:30 AM		73				73			73
10:45 AM		75				75			75
11:00 AM		92				92			92
11:15 AM		75				75			75
11:30 AM		73				73			73
11:45 AM		92				92			92
12:00 PM		85				85			85
12:15 PM		100				100			100
12:30 PM		96				96			96
12:45 PM		83				83			83
1:00 PM		103				103			103
1:15 PM		82				82			82
1:30 PM		103				103			103
1:45 PM		110				110			110
2:00 PM		113				113			113
2:15 PM		93				93			93
2:30 PM		79				79			79
2:45 PM		122				122			122
3:00 PM		111				111			111
3:15 PM		84				84			84
3:30 PM		88				88			88
3:45 PM		84				84			84
4:00 PM		101				101			101
4:15 PM		72				72			72
4:30 PM		71				71			71
4:45 PM		64				64			64
5:00 PM		85				85			85
5:15 PM		75				75			75
5:30 PM		52				52			52
5:45 PM		77				77			77
6:00 PM		69				69			69
6:15 PM		47				47			47
6:30 PM		58				58			58
6:45 PM		44				44			44
7:00 PM		52				52			52
7:15 PM		43				43			43
7:30 PM		32				32			32
7:45 PM		23				23			23
8:00 PM		25				25			25
8:15 PM		24				24			24
8:30 PM		19				19			19
8:45 PM		11				11			11
9:00 PM		19				19			19
9:15 PM		12				12			12
9:30 PM		11				11			11
9:45 PM		11				11			11
10:00 PM		7				7			7
10:15 PM		10				10			10
10:30 PM		7				7			7
10:45 PM		11				11			11
11:00 PM		12				12			12
11:15 PM		4				4			4
11:30 PM		4				4			4
11:45 PM		5				5			5
Day Total		5658				5658			5658
ADT		5658				5658			5658
%Weekday Average		100.00%							
%Week Average		100.00%				100.00%			
AM Peak		5:15 AM				5:15 AM			5:15 AM
Volume		108				108			108
PM Peak		2:45 PM				2:45 PM			2:45 PM
Volume		122				122			122

QUALITY COUNTS REPORT
==========

Type: Volume Data
Location: SB I-95/495 off-ramp to Arena Dr
Specific Lo 0 ft from
City/State: Landover MD
QCJobNo: 13210303
Direction: SB
Comments:

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week Hourly Traffic
		24-Feb-15							
12:00 AM		8				8			8
12:15 AM		15				15			15
12:30 AM		15				15			15
12:45 AM		16				16			16
1:00 AM		7				7			7
1:15 AM		9				9			9
1:30 AM		8				8			8
1:45 AM		9				9			9
2:00 AM		0				0			0
2:15 AM		4				4			4
2:30 AM		4				4			4
2:45 AM		9				9			9
3:00 AM		4				4			4
3:15 AM		6				6			6
3:30 AM		6				6			6
3:45 AM		7				7			7
4:00 AM		11				11			11
4:15 AM		10				10			10
4:30 AM		13				13			13
4:45 AM		17				17			17
5:00 AM		17				17			17
5:15 AM		14				14			14
5:30 AM		14				14			14
5:45 AM		29				29			29
6:00 AM		21				21			21
6:15 AM		34				34			34
6:30 AM		55				55			55
6:45 AM		63				63			63
7:00 AM		63				63			63
7:15 AM		57				57			57
7:30 AM		70				70			70
7:45 AM		105				105			105
8:00 AM		95				95			95
8:15 AM		83				83			83
8:30 AM		114				114			114
8:45 AM		109				109			109
9:00 AM		93				93			93
9:15 AM		73				73			73
9:30 AM		62				62			62
9:45 AM		68				68			68
10:00 AM		58				58			58
10:15 AM		58				58			58
10:30 AM		58				58			58
10:45 AM		75				75			75
11:00 AM		57				57			57
11:15 AM		72				72			72
11:30 AM		58				58			58
11:45 AM		77				77			77
12:00 PM		59				59			59
12:15 PM		60				60			60
12:30 PM		62				62			62
12:45 PM		71				71			71
1:00 PM		54				54			54
1:15 PM		70				70			70
1:30 PM		71				71			71
1:45 PM		61				61			61
2:00 PM		73				73			73
2:15 PM		71				71			71
2:30 PM		68				68			68
2:45 PM		78				78			78
3:00 PM		65				65			65
3:15 PM		89				89			89
3:30 PM		79				79			79
3:45 PM		90				90			90
4:00 PM		93				93			93
4:15 PM		91				91			91
4:30 PM		93				93			93
4:45 PM		134				134			134
5:00 PM		154				154			154
5:15 PM		157				157			157
5:30 PM		120				120			120
5:45 PM		128				128			128
6:00 PM		163				163			163
6:15 PM		266				266			266
6:30 PM		121				121			121
6:45 PM		102				102			102
7:00 PM		101				101			101
7:15 PM		93				93			93
7:30 PM		84				84			84
7:45 PM		70				70			70
8:00 PM		55				55			55
8:15 PM		69				69			69
8:30 PM		60				60			60
8:45 PM		52				52			52
9:00 PM		50				50			50
9:15 PM		56				56			56
9:30 PM		46				46			46
9:45 PM		41				41			41
10:00 PM		52				52			52
10:15 PM		31				31			31
10:30 PM		32				32			32
10:45 PM		23				23			23
11:00 PM		24				24			24
11:15 PM		22				22			22
11:30 PM		25				25			25
11:45 PM		18				18			18
Day Total		5677				5677			5677
ADT		5677				5677			5677
%Weekday Average		100.00%							
%Week Average		100.00%				100.00%			
AM Peak		8:30 AM				8:30 AM			8:30 AM
Volume		114				114			114
PM Peak		6:15 PM				6:15 PM			6:15 PM
Volume		266				266			266

QUALITY COUNTS REPORT
==========

Type: Volume Data
Location: NB I-95/495 off-ramp to Landover Rd
Specific Lo 0 ft from
City/State: Landover MD
QCJobNo: 13210302
Direction: NB
Comments:

'==========

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week Hourly Traffic
		24-Feb-15							
12:00 AM		29				29			29
12:15 AM		25				25			25
12:30 AM		24				24			24
12:45 AM		22				22			22
1:00 AM		12				12			12
1:15 AM		10				10			10
1:30 AM		10				10			10
1:45 AM		9				9			9
2:00 AM		9				9			9
2:15 AM		8				8			8
2:30 AM		14				14			14
2:45 AM		22				22			22
3:00 AM		17				17			17
3:15 AM		11				11			11
3:30 AM		20				20			20
3:45 AM		24				24			24
4:00 AM		19				19			19
4:15 AM		30				30			30
4:30 AM		39				39			39
4:45 AM		56				56			56
5:00 AM		36				36			36
5:15 AM		67				67			67
5:30 AM		62				62			62
5:45 AM		127				127			127
6:00 AM		120				120			120
6:15 AM		140				140			140
6:30 AM		215				215			215
6:45 AM		231				231			231
7:00 AM		257				257			257
7:15 AM		299				299			299
7:30 AM		281				281			281
7:45 AM		266				266			266
8:00 AM		273				273			273
8:15 AM		231				231			231
8:30 AM		289				289			289
8:45 AM		224				224			224
9:00 AM		219				219			219
9:15 AM		197				197			197
9:30 AM		179				179			179
9:45 AM		173				173			173
10:00 AM		144				144			144
10:15 AM		141				141			141
10:30 AM		141				141			141
10:45 AM		124				124			124
11:00 AM		127				127			127
11:15 AM		156				156			156
11:30 AM		141				141			141
11:45 AM		147				147			147
12:00 PM		149				149			149
12:15 PM		189				189			189
12:30 PM		171				171			171
12:45 PM		146				146			146
1:00 PM		158				158			158
1:15 PM		147				147			147
1:30 PM		153				153			153
1:45 PM		168				168			168
2:00 PM		142				142			142
2:15 PM		122				122			122
2:30 PM		146				146			146
2:45 PM		178				178			178
3:00 PM		177				177			177
3:15 PM		211				211			211
3:30 PM		225				225			225
3:45 PM		244				244			244
4:00 PM		245				245			245
4:15 PM		246				246			246
4:30 PM		232				232			232
4:45 PM		265				265			265
5:00 PM		238				238			238
5:15 PM		271				271			271
5:30 PM		236				236			236
5:45 PM		220				220			220
6:00 PM		220				220			220
6:15 PM		202				202			202
6:30 PM		209				209			209
6:45 PM		194				194			194
7:00 PM		178				178			178
7:15 PM		154				154			154
7:30 PM		145				145			145
7:45 PM		126				126			126
8:00 PM		115				115			115
8:15 PM		109				109			109
8:30 PM		94				94			94
8:45 PM		98				98			98
9:00 PM		92				92			92
9:15 PM		86				86			86
9:30 PM		96				96			96
9:45 PM		82				82			82
10:00 PM		62				62			62
10:15 PM		67				67			67
10:30 PM		56				56			56
10:45 PM		50				50			50
11:00 PM		37				37			37
11:15 PM		50				50			50
11:30 PM		44				44			44
11:45 PM		41				41			41
Day Total		12703				12703			12703
ADT		12703				12703			12703
%Weekday Average		100.00%							
%Week Average		100.00%				100.00%			
AM Peak		7:15 AM				7:15 AM			7:15 AM
Volume		299				299			299
PM Peak		5:15 PM				5:15 PM			5:15 PM
Volume		271				271			271

QUALITY COUNTS REPORT
==========

Type: Volume Data
Location: Landover Rd off-ramp to SB I-95/495
Specific Lo 0 ft from
City/State: Landover MD
QCJobNo: 13210301
Direction: SB
Comments:

'==========

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week Hourly Traffic
		24-Feb-15							
12:00 AM		38				38			38
12:15 AM		29				29			29
12:30 AM		23				23			23
12:45 AM		30				30			30
1:00 AM		17				17			17
1:15 AM		7				7			7
1:30 AM		20				20			20
1:45 AM		10				10			10
2:00 AM		16				16			16
2:15 AM		15				15			15
2:30 AM		9				9			9
2:45 AM		9				9			9
3:00 AM		10				10			10
3:15 AM		12				12			12
3:30 AM		22				22			22
3:45 AM		10				10			10
4:00 AM		8				8			8
4:15 AM		19				19			19
4:30 AM		27				27			27
4:45 AM		37				37			37
5:00 AM		52				52			52
5:15 AM		46				46			46
5:30 AM		78				78			78
5:45 AM		82				82			82
6:00 AM		94				94			94
6:15 AM		109				109			109
6:30 AM		141				141			141
6:45 AM		142				142			142
7:00 AM		153				153			153
7:15 AM		165				165			165
7:30 AM		200				200			200
7:45 AM		205				205			205
8:00 AM		175				175			175
8:15 AM		186				186			186
8:30 AM		175				175			175
8:45 AM		159				159			159
9:00 AM		171				171			171
9:15 AM		161				161			161
9:30 AM		161				161			161
9:45 AM		156				156			156
10:00 AM		142				142			142
10:15 AM		148				148			148
10:30 AM		140				140			140
10:45 AM		147				147			147
11:00 AM		133				133			133
11:15 AM		116				116			116
11:30 AM		155				155			155
11:45 AM		170				170			170
12:00 PM		149				149			149
12:15 PM		165				165			165
12:30 PM		162				162			162
12:45 PM		177				177			177
1:00 PM		193				193			193
1:15 PM		176				176			176
1:30 PM		186				186			186
1:45 PM		190				190			190
2:00 PM		197				197			197
2:15 PM		231				231			231
2:30 PM		237				237			237
2:45 PM		225				225			225
3:00 PM		240				240			240
3:15 PM		244				244			244
3:30 PM		252				252			252
3:45 PM		263				263			263
4:00 PM		238				238			238
4:15 PM		271				271			271
4:30 PM		270				270			270
4:45 PM		269				269			269
5:00 PM		325				325			325
5:15 PM		273				273			273
5:30 PM		299				299			299
5:45 PM		251				251			251
6:00 PM		257				257			257
6:15 PM		226				226			226
6:30 PM		208				208			208
6:45 PM		179				179			179
7:00 PM		249				249			249
7:15 PM		231				231			231
7:30 PM		183				183			183
7:45 PM		192				192			192
8:00 PM		195				195			195
8:15 PM		176				176			176
8:30 PM		181				181			181
8:45 PM		189				189			189
9:00 PM		189				189			189
9:15 PM		148				148			148
9:30 PM		136				136			136
9:45 PM		101				101			101
10:00 PM		101				101			101
10:15 PM		77				77			77
10:30 PM		74				74			74
10:45 PM		62				62			62
11:00 PM		66				66			66
11:15 PM		65				65			65
11:30 PM		41				41			41
11:45 PM		40				40			40
Day Total		13379				13379			13379
ADT		13379				13379			13379
%Weekday Average		100.00%							
%Week Average		100.00%				100.00%			
AM Peak		7:45 AM				7:45 AM			7:45 AM
Volume		205				205			205
PM Peak		5:00 PM				5:00 PM			5:00 PM
Volume		325				325			325

QUALITY COUNTS REPORT
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Intersection:	NB I-95/495 Mainline Btwn Arena Dr & Central Ave	
City/State:	Capitol Heights	MD
Date:	1/15/2015	
QCJobNo:	13171531	
ClientID:		
Comments:		
PEAK HOUR START	7:15 AM	
PEAK HOUR END	8:15 AM	
PEAK 15-MIN START	7:30 AM	
PEAK 15-MIN END	7:45 AM	
PHF	0.96	

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7	
EBLane7								WBLane1
EBLane6								WBLane2
EBLane5								WBLane3
EBLane4								WBLane4
EBLane3								WBLane5
EBLane2								WBLane6
EBLane1								WBLane7
			T	T	T	T	T	
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	8158	0	0	0	0	0	0	0	0	0	0	8158	0	0	0	8158	0	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	6.9	0	0	0	0	0	0	0	0	0	0	6.9	0	0	0	6.9	0	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	0	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	8496	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8496
Heavy Trucks	0	504	0			0	0	0			0	0	0			0	0	0			504
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282	
12:15 AM	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225	
12:30 AM	0	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193	
12:45 AM	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	855
1:00 AM	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	751
1:15 AM	0	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135	661
1:30 AM	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	623
1:45 AM	0	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125	593
2:00 AM	0	142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142	557

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 Mainline Btwn Arena Dr & Central Ave

City/State: Capitol Heights MD

Date: 1/15/2015

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
2:15 AM	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	571
2:30 AM	0	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136	552
2:45 AM	0	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151	578
3:00 AM	0	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173	609
3:15 AM	0	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195	655
3:30 AM	0	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215	734
3:45 AM	0	212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	795
4:00 AM	0	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	268	890
4:15 AM	0	346	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	346	1041
4:30 AM	0	452	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	452	1278
4:45 AM	0	639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	639	1705
5:00 AM	0	746	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	746	2183
5:15 AM	0	1062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1062	2899
5:30 AM	0	1389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1389	3836
5:45 AM	0	1421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1421	4618
6:00 AM	0	1454	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1454	5326
6:15 AM	0	1616	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1616	5880
6:30 AM	0	1804	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1804	6295
6:45 AM	0	1962	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1962	6836
7:00 AM	0	1941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1941	7323
7:15 AM	0	2058	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2058	7765
7:30 AM	0	2124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2124	8085
7:45 AM	0	2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2007	8130
8:00 AM	0	1969	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1969	8158
8:15 AM	0	1438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1438	7538
8:30 AM	0	1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1015	6429
8:45 AM	0	1789	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1789	6211
9:00 AM	0	1970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1970	6212
9:15 AM	0	1664	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1664	6438
9:30 AM	0	1561	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1561	6984
9:45 AM	0	1407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1407	6602
10:00 AM	0	1425	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1425	6057
10:15 AM	0	1389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1389	5782
10:30 AM	0	1377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1377	5598
10:45 AM	0	1322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1322	5513
11:00 AM	0	1281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1281	5369
11:15 AM	0	1311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1311	5291
11:30 AM	0	1325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1325	5239
11:45 AM	0	1333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1333	5250
12:00 PM	0	1269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1269	5238
12:15 PM	0	1281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1281	5208
12:30 PM	0	1341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1341	5224
12:45 PM	0	1357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1357	5248
1:00 PM	0	1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1330	5309

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 Mainline Btwn Arena Dr & Central Ave

City/State: Capitol Heights MD

Date: 1/15/2015

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:15 PM	0	1375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1375	5403
1:30 PM	0	1514	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1514	5576
1:45 PM	0	1433	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1433	5652
2:00 PM	0	1527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1527	5849
2:15 PM	0	1643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1643	6117
2:30 PM	0	1669	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1669	6272
2:45 PM	0	1666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1666	6505
3:00 PM	0	1679	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1679	6657
3:15 PM	0	1484	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1484	6498
3:30 PM	0	1856	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1856	6685
3:45 PM	0	1929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1929	6948
4:00 PM	0	1851	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1851	7120
4:15 PM	0	1798	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1798	7434
4:30 PM	0	1821	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1821	7399
4:45 PM	0	1789	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1789	7259
5:00 PM	0	1689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1689	7097
5:15 PM	0	1731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1731	7030
5:30 PM	0	1302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1302	6511
5:45 PM	0	1657	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1657	6379
6:00 PM	0	1508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1508	6198
6:15 PM	0	1528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1528	5995
6:30 PM	0	1510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1510	6203
6:45 PM	0	1381	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1381	5927
7:00 PM	0	1317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1317	5736
7:15 PM	0	1179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1179	5387
7:30 PM	0	1165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1165	5042
7:45 PM	0	1047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1047	4708
8:00 PM	0	976	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	976	4367
8:15 PM	0	893	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	893	4081
8:30 PM	0	821	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	821	3737
8:45 PM	0	776	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	776	3466
9:00 PM	0	799	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	799	3289
9:15 PM	0	889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	889	3285
9:30 PM	0	794	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	794	3258
9:45 PM	0	699	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	699	3181
10:00 PM	0	622	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	622	3004
10:15 PM	0	619	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	619	2734
10:30 PM	0	558	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	558	2498
10:45 PM	0	488	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	488	2287
11:00 PM	0	427	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	427	2092
11:15 PM	0	376	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	376	1849
11:30 PM	0	362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	362	1653
11:45 PM	0	316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316	1481

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 Mainline Btwn Arena Dr & Central Ave

City/State: Capitol Heights MD

Date: 1/15/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	52	0	0	0	0	0	0	0	0	0	0	52
12:15 AM	0	48	0	0	0	0	0	0	0	0	0	0	48
12:30 AM	0	46	0	0	0	0	0	0	0	0	0	0	46
12:45 AM	0	50	0	0	0	0	0	0	0	0	0	0	50
1:00 AM	0	47	0	0	0	0	0	0	0	0	0	0	47
1:15 AM	0	39	0	0	0	0	0	0	0	0	0	0	39
1:30 AM	0	42	0	0	0	0	0	0	0	0	0	0	42
1:45 AM	0	43	0	0	0	0	0	0	0	0	0	0	43
2:00 AM	0	47	0	0	0	0	0	0	0	0	0	0	47
2:15 AM	0	57	0	0	0	0	0	0	0	0	0	0	57
2:30 AM	0	50	0	0	0	0	0	0	0	0	0	0	50
2:45 AM	0	47	0	0	0	0	0	0	0	0	0	0	47
3:00 AM	0	63	0	0	0	0	0	0	0	0	0	0	63
3:15 AM	0	61	0	0	0	0	0	0	0	0	0	0	61
3:30 AM	0	53	0	0	0	0	0	0	0	0	0	0	53
3:45 AM	0	54	0	0	0	0	0	0	0	0	0	0	54
4:00 AM	0	62	0	0	0	0	0	0	0	0	0	0	62
4:15 AM	0	63	0	0	0	0	0	0	0	0	0	0	63
4:30 AM	0	79	0	0	0	0	0	0	0	0	0	0	79
4:45 AM	0	90	0	0	0	0	0	0	0	0	0	0	90
5:00 AM	0	92	0	0	0	0	0	0	0	0	0	0	92
5:15 AM	0	100	0	0	0	0	0	0	0	0	0	0	100
5:30 AM	0	90	0	0	0	0	0	0	0	0	0	0	90
5:45 AM	0	87	0	0	0	0	0	0	0	0	0	0	87
6:00 AM	0	104	0	0	0	0	0	0	0	0	0	0	104
6:15 AM	0	106	0	0	0	0	0	0	0	0	0	0	106
6:30 AM	0	177	0	0	0	0	0	0	0	0	0	0	177
6:45 AM	0	137	0	0	0	0	0	0	0	0	0	0	137
7:00 AM	0	135	0	0	0	0	0	0	0	0	0	0	135
7:15 AM	0	142	0	0	0	0	0	0	0	0	0	0	142
7:30 AM	0	126	0	0	0	0	0	0	0	0	0	0	126
7:45 AM	0	151	0	0	0	0	0	0	0	0	0	0	151
8:00 AM	0	145	0	0	0	0	0	0	0	0	0	0	145
8:15 AM	0	121	0	0	0	0	0	0	0	0	0	0	121
8:30 AM	0	98	0	0	0	0	0	0	0	0	0	0	98
8:45 AM	0	202	0	0	0	0	0	0	0	0	0	0	202
9:00 AM	0	200	0	0	0	0	0	0	0	0	0	0	200
9:15 AM	0	176	0	0	0	0	0	0	0	0	0	0	176
9:30 AM	0	171	0	0	0	0	0	0	0	0	0	0	171
9:45 AM	0	160	0	0	0	0	0	0	0	0	0	0	160
10:00 AM	0	224	0	0	0	0	0	0	0	0	0	0	224
10:15 AM	0	204	0	0	0	0	0	0	0	0	0	0	204
10:30 AM	0	219	0	0	0	0	0	0	0	0	0	0	219
10:45 AM	0	187	0	0	0	0	0	0	0	0	0	0	187
11:00 AM	0	199	0	0	0	0	0	0	0	0	0	0	199

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 Mainline Btwn Arena Dr & Central Ave

City/State: Capitol Heights MD

Date: 1/15/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:15 AM	0	198	0	0	0	0	0	0	0	0	0	0	198
11:30 AM	0	202	0	0	0	0	0	0	0	0	0	0	202
11:45 AM	0	213	0	0	0	0	0	0	0	0	0	0	213
12:00 PM	0	187	0	0	0	0	0	0	0	0	0	0	187
12:15 PM	0	168	0	0	0	0	0	0	0	0	0	0	168
12:30 PM	0	205	0	0	0	0	0	0	0	0	0	0	205
12:45 PM	0	202	0	0	0	0	0	0	0	0	0	0	202
1:00 PM	0	201	0	0	0	0	0	0	0	0	0	0	201
1:15 PM	0	196	0	0	0	0	0	0	0	0	0	0	196
1:30 PM	0	189	0	0	0	0	0	0	0	0	0	0	189
1:45 PM	0	204	0	0	0	0	0	0	0	0	0	0	204
2:00 PM	0	159	0	0	0	0	0	0	0	0	0	0	159
2:15 PM	0	174	0	0	0	0	0	0	0	0	0	0	174
2:30 PM	0	172	0	0	0	0	0	0	0	0	0	0	172
2:45 PM	0	159	0	0	0	0	0	0	0	0	0	0	159
3:00 PM	0	155	0	0	0	0	0	0	0	0	0	0	155
3:15 PM	0	123	0	0	0	0	0	0	0	0	0	0	123
3:30 PM	0	156	0	0	0	0	0	0	0	0	0	0	156
3:45 PM	0	147	0	0	0	0	0	0	0	0	0	0	147
4:00 PM	0	169	0	0	0	0	0	0	0	0	0	0	169
4:15 PM	0	135	0	0	0	0	0	0	0	0	0	0	135
4:30 PM	0	107	0	0	0	0	0	0	0	0	0	0	107
4:45 PM	0	113	0	0	0	0	0	0	0	0	0	0	113
5:00 PM	0	105	0	0	0	0	0	0	0	0	0	0	105
5:15 PM	0	98	0	0	0	0	0	0	0	0	0	0	98
5:30 PM	0	68	0	0	0	0	0	0	0	0	0	0	68
5:45 PM	0	96	0	0	0	0	0	0	0	0	0	0	96
6:00 PM	0	71	0	0	0	0	0	0	0	0	0	0	71
6:15 PM	0	60	0	0	0	0	0	0	0	0	0	0	60
6:30 PM	0	78	0	0	0	0	0	0	0	0	0	0	78
6:45 PM	0	81	0	0	0	0	0	0	0	0	0	0	81
7:00 PM	0	68	0	0	0	0	0	0	0	0	0	0	68
7:15 PM	0	76	0	0	0	0	0	0	0	0	0	0	76
7:30 PM	0	79	0	0	0	0	0	0	0	0	0	0	79
7:45 PM	0	66	0	0	0	0	0	0	0	0	0	0	66
8:00 PM	0	79	0	0	0	0	0	0	0	0	0	0	79
8:15 PM	0	58	0	0	0	0	0	0	0	0	0	0	58
8:30 PM	0	46	0	0	0	0	0	0	0	0	0	0	46
8:45 PM	0	54	0	0	0	0	0	0	0	0	0	0	54
9:00 PM	0	46	0	0	0	0	0	0	0	0	0	0	46
9:15 PM	0	58	0	0	0	0	0	0	0	0	0	0	58
9:30 PM	0	55	0	0	0	0	0	0	0	0	0	0	55
9:45 PM	0	54	0	0	0	0	0	0	0	0	0	0	54
10:00 PM	0	45	0	0	0	0	0	0	0	0	0	0	45
10:15 PM	0	60	0	0	0	0	0	0	0	0	0	0	60

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 Mainline Btwn Arena Dr & Central Ave

City/State: Capitol Heights MD

Date: 1/15/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
10:30 PM	0	46	0	0	0	0	0	0	0	0	0	0	46
10:45 PM	0	49	0	0	0	0	0	0	0	0	0	0	49
11:00 PM	0	33	0	0	0	0	0	0	0	0	0	0	33
11:15 PM	0	43	0	0	0	0	0	0	0	0	0	0	43
11:30 PM	0	49	0	0	0	0	0	0	0	0	0	0	49
11:45 PM	0	47	0	0	0	0	0	0	0	0	0	0	47

QUALITY COUNTS REPORT

Intersection:	SB I-95/495 N Btwn Arena Dr & Central Ave
City/State:	Capitol Heigh MD
Date:	1/15/2015
QCJobNo:	13171532
ClientID:	
Comments:	
PEAK HOUR START	3:15 PM
PEAK HOUR END	4:15 PM
PEAK 15-MIN START	3:15 PM
PEAK 15-MIN END	3:30 PM
PHF	0.97

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7
	T	T	T	T	T		
EBLane7							WBLane1
EBLane6							WBLane2
EBLane5							WBLane3
EBLane4							WBLane4
EBLane3							WBLane5
EBLane2							WBLane6
EBLane1							WBLane7
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	8060	0	0	0	0	0	0	0	0	8060	0	0	0	8060	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	6.9	0	0	0	0	0	0	0	0	6.9	0	0	0	6.9	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	0	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	0	0	0	0	0	8316	0	0	0	0	0	0	0	0	0	0	0	0	0	8316
Heavy Trucks	0	0	0			0	716	0			0	0	0			0	0	0			716
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	0	0	0	0	0	329	0	0	0	0	0	0	0	0	0	0	0	0	0	329	
12:15 AM	0	0	0	0	0	0	312	0	0	0	0	0	0	0	0	0	0	0	0	0	312	
12:30 AM	0	0	0	0	0	0	287	0	0	0	0	0	0	0	0	0	0	0	0	0	287	
12:45 AM	0	0	0	0	0	0	247	0	0	0	0	0	0	0	0	0	0	0	0	0	247	1175
1:00 AM	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	200	1046
1:15 AM	0	0	0	0	0	0	186	0	0	0	0	0	0	0	0	0	0	0	0	0	186	920
1:30 AM	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0	0	0	0	0	0	167	800

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 N Btwn Arena Dr & Central Ave
City/State: Capitol Heigh MD
Date: 1/15/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:45 AM	0	0	0	0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0	0	176	729
2:00 AM	0	0	0	0	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0	0	152	681
2:15 AM	0	0	0	0	0	0	153	0	0	0	0	0	0	0	0	0	0	0	0	0	153	648
2:30 AM	0	0	0	0	0	0	175	0	0	0	0	0	0	0	0	0	0	0	0	0	175	656
2:45 AM	0	0	0	0	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0	159	639
3:00 AM	0	0	0	0	0	0	153	0	0	0	0	0	0	0	0	0	0	0	0	0	153	640
3:15 AM	0	0	0	0	0	0	182	0	0	0	0	0	0	0	0	0	0	0	0	0	182	669
3:30 AM	0	0	0	0	0	0	171	0	0	0	0	0	0	0	0	0	0	0	0	0	171	665
3:45 AM	0	0	0	0	0	0	163	0	0	0	0	0	0	0	0	0	0	0	0	0	163	669
4:00 AM	0	0	0	0	0	0	198	0	0	0	0	0	0	0	0	0	0	0	0	0	198	714
4:15 AM	0	0	0	0	0	0	254	0	0	0	0	0	0	0	0	0	0	0	0	0	254	786
4:30 AM	0	0	0	0	0	0	283	0	0	0	0	0	0	0	0	0	0	0	0	0	283	898
4:45 AM	0	0	0	0	0	0	398	0	0	0	0	0	0	0	0	0	0	0	0	0	398	1133
5:00 AM	0	0	0	0	0	0	509	0	0	0	0	0	0	0	0	0	0	0	0	0	509	1444
5:15 AM	0	0	0	0	0	0	690	0	0	0	0	0	0	0	0	0	0	0	0	0	690	1880
5:30 AM	0	0	0	0	0	0	964	0	0	0	0	0	0	0	0	0	0	0	0	0	964	2561
5:45 AM	0	0	0	0	0	0	1064	0	0	0	0	0	0	0	0	0	0	0	0	0	1064	3227
6:00 AM	0	0	0	0	0	0	1235	0	0	0	0	0	0	0	0	0	0	0	0	0	1235	3953
6:15 AM	0	0	0	0	0	0	1443	0	0	0	0	0	0	0	0	0	0	0	0	0	1443	4706
6:30 AM	0	0	0	0	0	0	1674	0	0	0	0	0	0	0	0	0	0	0	0	0	1674	5416
6:45 AM	0	0	0	0	0	0	1689	0	0	0	0	0	0	0	0	0	0	0	0	0	1689	6041
7:00 AM	0	0	0	0	0	0	1836	0	0	0	0	0	0	0	0	0	0	0	0	0	1836	6642
7:15 AM	0	0	0	0	0	0	1936	0	0	0	0	0	0	0	0	0	0	0	0	0	1936	7135
7:30 AM	0	0	0	0	0	0	1923	0	0	0	0	0	0	0	0	0	0	0	0	0	1923	7384
7:45 AM	0	0	0	0	0	0	1814	0	0	0	0	0	0	0	0	0	0	0	0	0	1814	7509
8:00 AM	0	0	0	0	0	0	1816	0	0	0	0	0	0	0	0	0	0	0	0	0	1816	7489
8:15 AM	0	0	0	0	0	0	1686	0	0	0	0	0	0	0	0	0	0	0	0	0	1686	7239
8:30 AM	0	0	0	0	0	0	1428	0	0	0	0	0	0	0	0	0	0	0	0	0	1428	6744
8:45 AM	0	0	0	0	0	0	1684	0	0	0	0	0	0	0	0	0	0	0	0	0	1684	6614
9:00 AM	0	0	0	0	0	0	1684	0	0	0	0	0	0	0	0	0	0	0	0	0	1684	6482
9:15 AM	0	0	0	0	0	0	1482	0	0	0	0	0	0	0	0	0	0	0	0	0	1482	6278
9:30 AM	0	0	0	0	0	0	1440	0	0	0	0	0	0	0	0	0	0	0	0	0	1440	6290
9:45 AM	0	0	0	0	0	0	1387	0	0	0	0	0	0	0	0	0	0	0	0	0	1387	5993
10:00 AM	0	0	0	0	0	0	1293	0	0	0	0	0	0	0	0	0	0	0	0	0	1293	5602
10:15 AM	0	0	0	0	0	0	1236	0	0	0	0	0	0	0	0	0	0	0	0	0	1236	5356
10:30 AM	0	0	0	0	0	0	1208	0	0	0	0	0	0	0	0	0	0	0	0	0	1208	5124
10:45 AM	0	0	0	0	0	0	1299	0	0	0	0	0	0	0	0	0	0	0	0	0	1299	5036
11:00 AM	0	0	0	0	0	0	1248	0	0	0	0	0	0	0	0	0	0	0	0	0	1248	4991
11:15 AM	0	0	0	0	0	0	1238	0	0	0	0	0	0	0	0	0	0	0	0	0	1238	4993
11:30 AM	0	0	0	0	0	0	1285	0	0	0	0	0	0	0	0	0	0	0	0	0	1285	5070
11:45 AM	0	0	0	0	0	0	1204	0	0	0	0	0	0	0	0	0	0	0	0	0	1204	4975
12:00 PM	0	0	0	0	0	0	1244	0	0	0	0	0	0	0	0	0	0	0	0	0	1244	4971

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 N Btwn Arena Dr & Central Ave
City/State: Capitol Heigh MD
Date: 1/15/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:15 PM	0	0	0	0	0	0	1357	0	0	0	0	0	0	0	0	0	0	0	0	0	1357	5090
12:30 PM	0	0	0	0	0	0	1403	0	0	0	0	0	0	0	0	0	0	0	0	0	1403	5208
12:45 PM	0	0	0	0	0	0	1318	0	0	0	0	0	0	0	0	0	0	0	0	0	1318	5322
1:00 PM	0	0	0	0	0	0	1295	0	0	0	0	0	0	0	0	0	0	0	0	0	1295	5373
1:15 PM	0	0	0	0	0	0	1334	0	0	0	0	0	0	0	0	0	0	0	0	0	1334	5350
1:30 PM	0	0	0	0	0	0	1512	0	0	0	0	0	0	0	0	0	0	0	0	0	1512	5459
1:45 PM	0	0	0	0	0	0	1495	0	0	0	0	0	0	0	0	0	0	0	0	0	1495	5636
2:00 PM	0	0	0	0	0	0	1620	0	0	0	0	0	0	0	0	0	0	0	0	0	1620	5961
2:15 PM	0	0	0	0	0	0	1767	0	0	0	0	0	0	0	0	0	0	0	0	0	1767	6394
2:30 PM	0	0	0	0	0	0	1808	0	0	0	0	0	0	0	0	0	0	0	0	0	1808	6690
2:45 PM	0	0	0	0	0	0	1793	0	0	0	0	0	0	0	0	0	0	0	0	0	1793	6988
3:00 PM	0	0	0	0	0	0	1894	0	0	0	0	0	0	0	0	0	0	0	0	0	1894	7262
3:15 PM	0	0	0	0	0	0	2079	0	0	0	0	0	0	0	0	0	0	0	0	0	2079	7574
3:30 PM	0	0	0	0	0	0	2006	0	0	0	0	0	0	0	0	0	0	0	0	0	2006	7772
3:45 PM	0	0	0	0	0	0	1961	0	0	0	0	0	0	0	0	0	0	0	0	0	1961	7940
4:00 PM	0	0	0	0	0	0	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	2014	8060
4:15 PM	0	0	0	0	0	0	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	1985	7966
4:30 PM	0	0	0	0	0	0	1994	0	0	0	0	0	0	0	0	0	0	0	0	0	1994	7954
4:45 PM	0	0	0	0	0	0	1945	0	0	0	0	0	0	0	0	0	0	0	0	0	1945	7938
5:00 PM	0	0	0	0	0	0	1980	0	0	0	0	0	0	0	0	0	0	0	0	0	1980	7904
5:15 PM	0	0	0	0	0	0	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	1985	7904
5:30 PM	0	0	0	0	0	0	1863	0	0	0	0	0	0	0	0	0	0	0	0	0	1863	7773
5:45 PM	0	0	0	0	0	0	2037	0	0	0	0	0	0	0	0	0	0	0	0	0	2037	7865
6:00 PM	0	0	0	0	0	0	1787	0	0	0	0	0	0	0	0	0	0	0	0	0	1787	7672
6:15 PM	0	0	0	0	0	0	1798	0	0	0	0	0	0	0	0	0	0	0	0	0	1798	7485
6:30 PM	0	0	0	0	0	0	1728	0	0	0	0	0	0	0	0	0	0	0	0	0	1728	7350
6:45 PM	0	0	0	0	0	0	1805	0	0	0	0	0	0	0	0	0	0	0	0	0	1805	7118
7:00 PM	0	0	0	0	0	0	1532	0	0	0	0	0	0	0	0	0	0	0	0	0	1532	6863
7:15 PM	0	0	0	0	0	0	1331	0	0	0	0	0	0	0	0	0	0	0	0	0	1331	6396
7:30 PM	0	0	0	0	0	0	1234	0	0	0	0	0	0	0	0	0	0	0	0	0	1234	5902
7:45 PM	0	0	0	0	0	0	1148	0	0	0	0	0	0	0	0	0	0	0	0	0	1148	5245
8:00 PM	0	0	0	0	0	0	1233	0	0	0	0	0	0	0	0	0	0	0	0	0	1233	4946
8:15 PM	0	0	0	0	0	0	1140	0	0	0	0	0	0	0	0	0	0	0	0	0	1140	4755
8:30 PM	0	0	0	0	0	0	1092	0	0	0	0	0	0	0	0	0	0	0	0	0	1092	4613
8:45 PM	0	0	0	0	0	0	1050	0	0	0	0	0	0	0	0	0	0	0	0	0	1050	4515
9:00 PM	0	0	0	0	0	0	933	0	0	0	0	0	0	0	0	0	0	0	0	0	933	4215
9:15 PM	0	0	0	0	0	0	987	0	0	0	0	0	0	0	0	0	0	0	0	0	987	4062
9:30 PM	0	0	0	0	0	0	991	0	0	0	0	0	0	0	0	0	0	0	0	0	991	3961
9:45 PM	0	0	0	0	0	0	862	0	0	0	0	0	0	0	0	0	0	0	0	0	862	3773
10:00 PM	0	0	0	0	0	0	867	0	0	0	0	0	0	0	0	0	0	0	0	0	867	3707
10:15 PM	0	0	0	0	0	0	750	0	0	0	0	0	0	0	0	0	0	0	0	0	750	3470
10:30 PM	0	0	0	0	0	0	707	0	0	0	0	0	0	0	0	0	0	0	0	0	707	3186

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 N Btwn Arena Dr & Central Ave
City/State: Capitol Heigh MD
Date: 1/15/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
10:45 PM	0	0	0	0	0	0	665	0	0	0	0	0	0	0	0	0	0	0	0	0	665	2989
11:00 PM	0	0	0	0	0	0	501	0	0	0	0	0	0	0	0	0	0	0	0	0	501	2623
11:15 PM	0	0	0	0	0	0	506	0	0	0	0	0	0	0	0	0	0	0	0	0	506	2379
11:30 PM	0	0	0	0	0	0	519	0	0	0	0	0	0	0	0	0	0	0	0	0	519	2191
11:45 PM	0	0	0	0	0	0	382	0	0	0	0	0	0	0	0	0	0	0	0	0	382	1908

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	0	0	0	48	0	0	0	0	0	0	0	48
12:15 AM	0	0	0	0	46	0	0	0	0	0	0	0	46
12:30 AM	0	0	0	0	34	0	0	0	0	0	0	0	34
12:45 AM	0	0	0	0	37	0	0	0	0	0	0	0	37
1:00 AM	0	0	0	0	40	0	0	0	0	0	0	0	40
1:15 AM	0	0	0	0	38	0	0	0	0	0	0	0	38
1:30 AM	0	0	0	0	42	0	0	0	0	0	0	0	42
1:45 AM	0	0	0	0	49	0	0	0	0	0	0	0	49
2:00 AM	0	0	0	0	36	0	0	0	0	0	0	0	36
2:15 AM	0	0	0	0	38	0	0	0	0	0	0	0	38
2:30 AM	0	0	0	0	46	0	0	0	0	0	0	0	46
2:45 AM	0	0	0	0	37	0	0	0	0	0	0	0	37
3:00 AM	0	0	0	0	43	0	0	0	0	0	0	0	43
3:15 AM	0	0	0	0	55	0	0	0	0	0	0	0	55
3:30 AM	0	0	0	0	63	0	0	0	0	0	0	0	63
3:45 AM	0	0	0	0	52	0	0	0	0	0	0	0	52
4:00 AM	0	0	0	0	82	0	0	0	0	0	0	0	82
4:15 AM	0	0	0	0	85	0	0	0	0	0	0	0	85
4:30 AM	0	0	0	0	69	0	0	0	0	0	0	0	69
4:45 AM	0	0	0	0	100	0	0	0	0	0	0	0	100
5:00 AM	0	0	0	0	88	0	0	0	0	0	0	0	88
5:15 AM	0	0	0	0	121	0	0	0	0	0	0	0	121
5:30 AM	0	0	0	0	128	0	0	0	0	0	0	0	128
5:45 AM	0	0	0	0	111	0	0	0	0	0	0	0	111
6:00 AM	0	0	0	0	145	0	0	0	0	0	0	0	145
6:15 AM	0	0	0	0	119	0	0	0	0	0	0	0	119
6:30 AM	0	0	0	0	132	0	0	0	0	0	0	0	132
6:45 AM	0	0	0	0	172	0	0	0	0	0	0	0	172
7:00 AM	0	0	0	0	176	0	0	0	0	0	0	0	176
7:15 AM	0	0	0	0	156	0	0	0	0	0	0	0	156
7:30 AM	0	0	0	0	186	0	0	0	0	0	0	0	186
7:45 AM	0	0	0	0	180	0	0	0	0	0	0	0	180
8:00 AM	0	0	0	0	201	0	0	0	0	0	0	0	201
8:15 AM	0	0	0	0	173	0	0	0	0	0	0	0	173

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 N Btwn Arena Dr & Central Ave

City/State: Capitol Heigh MD

Date: 1/15/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
8:30 AM	0	0	0	0	163	0	0	0	0	0	0	0	163
8:45 AM	0	0	0	0	203	0	0	0	0	0	0	0	203
9:00 AM	0	0	0	0	254	0	0	0	0	0	0	0	254
9:15 AM	0	0	0	0	224	0	0	0	0	0	0	0	224
9:30 AM	0	0	0	0	222	0	0	0	0	0	0	0	222
9:45 AM	0	0	0	0	186	0	0	0	0	0	0	0	186
10:00 AM	0	0	0	0	194	0	0	0	0	0	0	0	194
10:15 AM	0	0	0	0	184	0	0	0	0	0	0	0	184
10:30 AM	0	0	0	0	181	0	0	0	0	0	0	0	181
10:45 AM	0	0	0	0	200	0	0	0	0	0	0	0	200
11:00 AM	0	0	0	0	192	0	0	0	0	0	0	0	192
11:15 AM	0	0	0	0	186	0	0	0	0	0	0	0	186
11:30 AM	0	0	0	0	201	0	0	0	0	0	0	0	201
11:45 AM	0	0	0	0	160	0	0	0	0	0	0	0	160
12:00 PM	0	0	0	0	199	0	0	0	0	0	0	0	199
12:15 PM	0	0	0	0	177	0	0	0	0	0	0	0	177
12:30 PM	0	0	0	0	191	0	0	0	0	0	0	0	191
12:45 PM	0	0	0	0	175	0	0	0	0	0	0	0	175
1:00 PM	0	0	0	0	172	0	0	0	0	0	0	0	172
1:15 PM	0	0	0	0	151	0	0	0	0	0	0	0	151
1:30 PM	0	0	0	0	174	0	0	0	0	0	0	0	174
1:45 PM	0	0	0	0	163	0	0	0	0	0	0	0	163
2:00 PM	0	0	0	0	182	0	0	0	0	0	0	0	182
2:15 PM	0	0	0	0	175	0	0	0	0	0	0	0	175
2:30 PM	0	0	0	0	169	0	0	0	0	0	0	0	169
2:45 PM	0	0	0	0	151	0	0	0	0	0	0	0	151
3:00 PM	0	0	0	0	142	0	0	0	0	0	0	0	142
3:15 PM	0	0	0	0	179	0	0	0	0	0	0	0	179
3:30 PM	0	0	0	0	125	0	0	0	0	0	0	0	125
3:45 PM	0	0	0	0	136	0	0	0	0	0	0	0	136
4:00 PM	0	0	0	0	118	0	0	0	0	0	0	0	118
4:15 PM	0	0	0	0	87	0	0	0	0	0	0	0	87
4:30 PM	0	0	0	0	71	0	0	0	0	0	0	0	71
4:45 PM	0	0	0	0	95	0	0	0	0	0	0	0	95
5:00 PM	0	0	0	0	72	0	0	0	0	0	0	0	72
5:15 PM	0	0	0	0	55	0	0	0	0	0	0	0	55
5:30 PM	0	0	0	0	58	0	0	0	0	0	0	0	58
5:45 PM	0	0	0	0	60	0	0	0	0	0	0	0	60
6:00 PM	0	0	0	0	76	0	0	0	0	0	0	0	76
6:15 PM	0	0	0	0	78	0	0	0	0	0	0	0	78
6:30 PM	0	0	0	0	111	0	0	0	0	0	0	0	111
6:45 PM	0	0	0	0	97	0	0	0	0	0	0	0	97
7:00 PM	0	0	0	0	81	0	0	0	0	0	0	0	81

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 N Btwn Arena Dr & Central Ave

City/State: Capitol Heigh MD

Date: 1/15/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
7:15 PM	0	0	0	0	63	0	0	0	0	0	0	0	63
7:30 PM	0	0	0	0	66	0	0	0	0	0	0	0	66
7:45 PM	0	0	0	0	67	0	0	0	0	0	0	0	67
8:00 PM	0	0	0	0	56	0	0	0	0	0	0	0	56
8:15 PM	0	0	0	0	53	0	0	0	0	0	0	0	53
8:30 PM	0	0	0	0	58	0	0	0	0	0	0	0	58
8:45 PM	0	0	0	0	67	0	0	0	0	0	0	0	67
9:00 PM	0	0	0	0	59	0	0	0	0	0	0	0	59
9:15 PM	0	0	0	0	49	0	0	0	0	0	0	0	49
9:30 PM	0	0	0	0	77	0	0	0	0	0	0	0	77
9:45 PM	0	0	0	0	44	0	0	0	0	0	0	0	44
10:00 PM	0	0	0	0	48	0	0	0	0	0	0	0	48
10:15 PM	0	0	0	0	54	0	0	0	0	0	0	0	54
10:30 PM	0	0	0	0	46	0	0	0	0	0	0	0	46
10:45 PM	0	0	0	0	49	0	0	0	0	0	0	0	49
11:00 PM	0	0	0	0	46	0	0	0	0	0	0	0	46
11:15 PM	0	0	0	0	43	0	0	0	0	0	0	0	43
11:30 PM	0	0	0	0	34	0	0	0	0	0	0	0	34
11:45 PM	0	0	0	0	40	0	0	0	0	0	0	0	40

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/4/2015

QCJobNo: 13180910

ClientID:

Comments:

PEAK HOUR START 7:30 AM

PEAK HOUR END 8:30 AM

PEAK 15-MIN START 7:30 AM

PEAK 15-MIN END 7:45 AM

PHF 0.95

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7	
EBLane7								WBLane1
EBLane6								WBLane2
EBLane5								WBLane3
EBLane4								WBLane4
EBLane3								WBLane5
EBLane2								WBLane6
EBLane1								WBLane7
						T	T	
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEnterin	EBEnterin	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	2570	0	0	0	0	0	0	0	0	0	0	2570	0	0	0	2570	0	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEnterin	EBEnterin	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	7.6	0	0	0	0	0	0	0	0	0	0	7.6	0	0	0	7.6	0	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	0	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	2700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2700
Heavy Trucks	0	180	0			0	0	0			0	0	0			0	0	0			180
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	
12:15 AM	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	
12:30 AM	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	
12:45 AM	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	147
1:00 AM	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	121
1:15 AM	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	114

QUALITY COUNTS REPORT
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Intersection: NB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/4/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:30 AM	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	119
1:45 AM	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	115
2:00 AM	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	136
2:15 AM	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	135
2:30 AM	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	124
2:45 AM	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	123
3:00 AM	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	115
3:15 AM	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	119
3:30 AM	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	136
3:45 AM	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	156
4:00 AM	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	175
4:15 AM	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	199
4:30 AM	0	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	237
4:45 AM	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96	285
5:00 AM	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	394
5:15 AM	0	181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	514
5:30 AM	0	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	672
5:45 AM	0	239	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	239	815
6:00 AM	0	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	890
6:15 AM	0	284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284	993
6:30 AM	0	316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316	1074
6:45 AM	0	359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	359	1194
7:00 AM	0	419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	419	1378
7:15 AM	0	561	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	561	1655
7:30 AM	0	675	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	675	2014
7:45 AM	0	657	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	657	2312
8:00 AM	0	639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	639	2532
8:15 AM	0	599	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	599	2570
8:30 AM	0	586	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	586	2481
8:45 AM	0	506	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	506	2330
9:00 AM	0	474	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	474	2165
9:15 AM	0	330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330	1896
9:30 AM	0	273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	273	1583
9:45 AM	0	258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	258	1335
10:00 AM	0	223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223	1084
10:15 AM	0	251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251	1005
10:30 AM	0	231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	963
10:45 AM	0	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	960
11:00 AM	0	254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	254	991
11:15 AM	0	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245	985
11:30 AM	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	987
11:45 AM	0	260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	260	992
12:00 PM	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	978
12:15 PM	0	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	988
12:30 PM	0	259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	259	1014
12:45 PM	0	219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	219	973

QUALITY COUNTS REPORT
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Intersection: NB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/4/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:00 PM	0	227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227	960
1:15 PM	0	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232	937
1:30 PM	0	251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251	929
1:45 PM	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250	960
2:00 PM	0	251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251	984
2:15 PM	0	293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	293	1045
2:30 PM	0	353	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	353	1147
2:45 PM	0	291	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	291	1188
3:00 PM	0	311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	311	1248
3:15 PM	0	284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284	1239
3:30 PM	0	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301	1187
3:45 PM	0	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	375	1271
4:00 PM	0	394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	394	1354
4:15 PM	0	504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	504	1574
4:30 PM	0	538	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	538	1811
4:45 PM	0	567	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	567	2003
5:00 PM	0	569	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	569	2178
5:15 PM	0	530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	530	2204
5:30 PM	0	504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	504	2170
5:45 PM	0	441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	441	2044
6:00 PM	0	333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	333	1808
6:15 PM	0	403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	403	1681
6:30 PM	0	411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	411	1588
6:45 PM	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270	1417
7:00 PM	0	217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	217	1301
7:15 PM	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225	1123
7:30 PM	0	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	198	910
7:45 PM	0	163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	163	803
8:00 PM	0	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	752
8:15 PM	0	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	693
8:30 PM	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	650
8:45 PM	0	161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	648
9:00 PM	0	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176	658
9:15 PM	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	647
9:30 PM	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	641
9:45 PM	0	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	588
10:00 PM	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	521
10:15 PM	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106	472
10:30 PM	0	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	426
10:45 PM	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106	424
11:00 PM	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	376
11:15 PM	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	339
11:30 PM	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	296
11:45 PM	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	250

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/4/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
12:15 AM	0	12	0	0	0	0	0	0	0	0	0	0	12
12:30 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
12:45 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
1:15 AM	0	12	0	0	0	0	0	0	0	0	0	0	12
1:30 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
1:45 AM	0	15	0	0	0	0	0	0	0	0	0	0	15
2:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
2:15 AM	0	13	0	0	0	0	0	0	0	0	0	0	13
2:30 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
2:45 AM	0	7	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	15	0	0	0	0	0	0	0	0	0	0	15
3:15 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
3:30 AM	0	13	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	21	0	0	0	0	0	0	0	0	0	0	21
4:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
4:15 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
4:30 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
4:45 AM	0	16	0	0	0	0	0	0	0	0	0	0	16
5:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	17
5:15 AM	0	25	0	0	0	0	0	0	0	0	0	0	25
5:30 AM	0	23	0	0	0	0	0	0	0	0	0	0	23
5:45 AM	0	25	0	0	0	0	0	0	0	0	0	0	25
6:00 AM	0	27	0	0	0	0	0	0	0	0	0	0	27
6:15 AM	0	38	0	0	0	0	0	0	0	0	0	0	38
6:30 AM	0	39	0	0	0	0	0	0	0	0	0	0	39
6:45 AM	0	41	0	0	0	0	0	0	0	0	0	0	41
7:00 AM	0	35	0	0	0	0	0	0	0	0	0	0	35
7:15 AM	0	51	0	0	0	0	0	0	0	0	0	0	51
7:30 AM	0	45	0	0	0	0	0	0	0	0	0	0	45
7:45 AM	0	58	0	0	0	0	0	0	0	0	0	0	58
8:00 AM	0	42	0	0	0	0	0	0	0	0	0	0	42
8:15 AM	0	50	0	0	0	0	0	0	0	0	0	0	50
8:30 AM	0	53	0	0	0	0	0	0	0	0	0	0	53
8:45 AM	0	78	0	0	0	0	0	0	0	0	0	0	78
9:00 AM	0	61	0	0	0	0	0	0	0	0	0	0	61
9:15 AM	0	48	0	0	0	0	0	0	0	0	0	0	48
9:30 AM	0	39	0	0	0	0	0	0	0	0	0	0	39
9:45 AM	0	44	0	0	0	0	0	0	0	0	0	0	44
10:00 AM	0	28	0	0	0	0	0	0	0	0	0	0	28
10:15 AM	0	43	0	0	0	0	0	0	0	0	0	0	43
10:30 AM	0	46	0	0	0	0	0	0	0	0	0	0	46
10:45 AM	0	42	0	0	0	0	0	0	0	0	0	0	42
11:00 AM	0	49	0	0	0	0	0	0	0	0	0	0	49
11:15 AM	0	38	0	0	0	0	0	0	0	0	0	0	38
11:30 AM	0	43	0	0	0	0	0	0	0	0	0	0	43

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/4/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:45 AM	0	43	0	0	0	0	0	0	0	0	0	0	43
12:00 PM	0	41	0	0	0	0	0	0	0	0	0	0	41
12:15 PM	0	47	0	0	0	0	0	0	0	0	0	0	47
12:30 PM	0	40	0	0	0	0	0	0	0	0	0	0	40
12:45 PM	0	30	0	0	0	0	0	0	0	0	0	0	30
1:00 PM	0	34	0	0	0	0	0	0	0	0	0	0	34
1:15 PM	0	33	0	0	0	0	0	0	0	0	0	0	33
1:30 PM	0	43	0	0	0	0	0	0	0	0	0	0	43
1:45 PM	0	46	0	0	0	0	0	0	0	0	0	0	46
2:00 PM	0	45	0	0	0	0	0	0	0	0	0	0	45
2:15 PM	0	48	0	0	0	0	0	0	0	0	0	0	48
2:30 PM	0	53	0	0	0	0	0	0	0	0	0	0	53
2:45 PM	0	30	0	0	0	0	0	0	0	0	0	0	30
3:00 PM	0	23	0	0	0	0	0	0	0	0	0	0	23
3:15 PM	0	15	0	0	0	0	0	0	0	0	0	0	15
3:30 PM	0	23	0	0	0	0	0	0	0	0	0	0	23
3:45 PM	0	23	0	0	0	0	0	0	0	0	0	0	23
4:00 PM	0	33	0	0	0	0	0	0	0	0	0	0	33
4:15 PM	0	43	0	0	0	0	0	0	0	0	0	0	43
4:30 PM	0	38	0	0	0	0	0	0	0	0	0	0	38
4:45 PM	0	35	0	0	0	0	0	0	0	0	0	0	35
5:00 PM	0	24	0	0	0	0	0	0	0	0	0	0	24
5:15 PM	0	31	0	0	0	0	0	0	0	0	0	0	31
5:30 PM	0	20	0	0	0	0	0	0	0	0	0	0	20
5:45 PM	0	20	0	0	0	0	0	0	0	0	0	0	20
6:00 PM	0	13	0	0	0	0	0	0	0	0	0	0	13
6:15 PM	0	21	0	0	0	0	0	0	0	0	0	0	21
6:30 PM	0	21	0	0	0	0	0	0	0	0	0	0	21
6:45 PM	0	19	0	0	0	0	0	0	0	0	0	0	19
7:00 PM	0	12	0	0	0	0	0	0	0	0	0	0	12
7:15 PM	0	19	0	0	0	0	0	0	0	0	0	0	19
7:30 PM	0	25	0	0	0	0	0	0	0	0	0	0	25
7:45 PM	0	17	0	0	0	0	0	0	0	0	0	0	17
8:00 PM	0	14	0	0	0	0	0	0	0	0	0	0	14
8:15 PM	0	9	0	0	0	0	0	0	0	0	0	0	9
8:30 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
8:45 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
9:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	11
9:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
9:30 PM	0	9	0	0	0	0	0	0	0	0	0	0	9
9:45 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
10:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
10:15 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
10:30 PM	0	7	0	0	0	0	0	0	0	0	0	0	7
10:45 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
11:15 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
11:30 PM	0	12	0	0	0	0	0	0	0	0	0	0	12
11:45 PM	0	8	0	0	0	0	0	0	0	0	0	0	8

QUALITY COUNTS REPORT
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Intersection: NB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015

QCJobNo: 13180915
ClientID:

Comments:

PEAK HOUR START 7:45 AM
PEAK HOUR END 8:45 AM
PEAK 15-MIN START 7:45 AM
PEAK 15-MIN END 8:00 AM
PHF 0.94

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7	
EBLane7								WBLane1
EBLane6								WBLane2
EBLane5								WBLane3
EBLane4								WBLane4
EBLane3								WBLane5
EBLane2								WBLane6
EBLane1								WBLane7
						T	T	
	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	2408	0	0	0	0	0	0	0	0	0	0	2408	0	0	0	2408	0	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	8.3	0	0	0	0	0	0	0	0	0	0	8.3	0	0	0	8.3	0	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	4	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	2568	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2568
Heavy Trucks	0	168	0			0	0	0			0	0	0			0	0	0			168
Pedestrians		0					0					0					0				0
Bicycles	0	4	0			0	0	0			0	0	0			0	0	0			4

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	
12:15 AM	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	
12:30 AM	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	
12:45 AM	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	123
1:00 AM	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	130
1:15 AM	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	124
1:30 AM	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	122
1:45 AM	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	130
2:00 AM	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	123
2:15 AM	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	123

QUALITY COUNTS REPORT
==========
Intersection: NB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
2:30 AM	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	127
2:45 AM	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	115
3:00 AM	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	125
3:15 AM	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	132
3:30 AM	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	145
3:45 AM	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	159
4:00 AM	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	168
4:15 AM	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	195
4:30 AM	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	229
4:45 AM	0	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	291
5:00 AM	0	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	385
5:15 AM	0	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	511
5:30 AM	0	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245	677
5:45 AM	0	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	809
6:00 AM	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	904
6:15 AM	0	284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284	997
6:30 AM	0	343	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	343	1095
6:45 AM	0	329	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	329	1189
7:00 AM	0	438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	438	1394
7:15 AM	0	461	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	461	1571
7:30 AM	0	496	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	496	1724
7:45 AM	0	642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	642	2037
8:00 AM	0	640	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	640	2239
8:15 AM	0	553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	553	2331
8:30 AM	0	573	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	573	2408
8:45 AM	0	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	361	2127
9:00 AM	0	325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	325	1812
9:15 AM	0	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282	1541
9:30 AM	0	287	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287	1255
9:45 AM	0	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245	1139
10:00 AM	0	284	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284	1098
10:15 AM	0	263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263	1079
10:30 AM	0	241	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	241	1033
10:45 AM	0	216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	1004
11:00 AM	0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228	948
11:15 AM	0	226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	911
11:30 AM	0	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	925
11:45 AM	0	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	964
12:00 PM	0	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242	978
12:15 PM	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237	989
12:30 PM	0	218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218	952
12:45 PM	0	206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206	903
1:00 PM	0	247	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247	908
1:15 PM	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	266	937
1:30 PM	0	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257	976

QUALITY COUNTS REPORT
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Intersection: NB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:45 PM	0	264	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	264	1034
2:00 PM	0	299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	299	1086
2:15 PM	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270	1090
2:30 PM	0	326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	326	1159
2:45 PM	0	348	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348	1243
3:00 PM	0	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	361	1305
3:15 PM	0	352	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	352	1387
3:30 PM	0	362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	362	1423
3:45 PM	0	369	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	369	1444
4:00 PM	0	438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	438	1521
4:15 PM	0	536	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	536	1705
4:30 PM	0	587	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	587	1930
4:45 PM	0	531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	531	2092
5:00 PM	0	527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	527	2181
5:15 PM	0	494	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	494	2139
5:30 PM	0	474	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	474	2026
5:45 PM	0	353	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	353	1848
6:00 PM	0	335	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	335	1656
6:15 PM	0	251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251	1413
6:30 PM	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	1179
6:45 PM	0	314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	314	1140
7:00 PM	0	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210	1015
7:15 PM	0	376	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	376	1140
7:30 PM	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225	1125
7:45 PM	0	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	985
8:00 PM	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	953
8:15 PM	0	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	727
8:30 PM	0	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158	660
8:45 PM	0	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139	625
9:00 PM	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	602
9:15 PM	0	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158	610
9:30 PM	0	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	621
9:45 PM	0	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	604
10:00 PM	0	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101	550
10:15 PM	0	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	505
10:30 PM	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	445
10:45 PM	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96	419
11:00 PM	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	384
11:15 PM	0	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	343
11:30 PM	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	309
11:45 PM	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	276

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
12:15 AM	0	12	0	0	0	0	0	0	0	0	0	0	12
12:30 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
12:45 AM	0	8	0	0	0	0	0	0	0	0	0	0	8
1:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	8
1:15 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
1:30 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
1:45 AM	0	12	0	0	0	0	0	0	0	0	0	0	12
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	8
2:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
2:30 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
2:45 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	17
3:15 AM	0	9	0	0	0	0	0	0	0	0	0	0	9
3:30 AM	0	9	0	0	0	0	0	0	0	0	0	0	9
3:45 AM	0	8	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	11
4:15 AM	0	8	0	0	0	0	0	0	0	0	0	0	8
4:30 AM	0	14	0	0	0	0	0	0	0	0	0	0	14
4:45 AM	0	10	0	0	0	0	0	0	0	0	0	0	10
5:00 AM	0	21	0	0	0	0	0	0	0	0	0	0	21
5:15 AM	0	25	0	0	0	0	0	0	0	0	0	0	25
5:30 AM	0	26	0	0	0	0	0	0	0	0	0	0	26
5:45 AM	0	23	0	0	0	0	0	0	0	0	0	0	23
6:00 AM	0	31	0	0	0	0	0	0	0	0	0	0	31
6:15 AM	0	26	0	0	0	0	0	0	0	0	0	0	26
6:30 AM	0	38	0	0	0	0	0	0	0	0	0	0	38
6:45 AM	0	25	0	0	0	0	0	0	0	0	0	0	25
7:00 AM	0	36	0	0	0	0	0	0	0	0	0	0	36
7:15 AM	0	36	0	0	0	0	0	0	0	0	0	0	36
7:30 AM	0	35	0	0	0	0	0	0	0	0	0	0	35
7:45 AM	0	42	0	0	0	0	0	0	0	0	0	0	42
8:00 AM	0	52	0	0	0	0	0	0	0	0	0	0	52
8:15 AM	0	54	0	0	0	0	0	0	0	0	0	0	54
8:30 AM	0	53	0	0	0	0	0	0	0	0	0	0	53
8:45 AM	0	32	0	0	0	0	0	0	0	0	0	0	32
9:00 AM	0	41	0	0	0	0	0	0	0	0	0	0	41
9:15 AM	0	37	0	0	0	0	0	0	0	0	0	0	37
9:30 AM	0	56	0	0	0	0	0	0	0	0	0	0	56
9:45 AM	0	45	0	0	0	0	0	0	0	0	0	0	45
10:00 AM	0	42	0	0	0	0	0	0	0	0	0	0	42
10:15 AM	0	32	0	0	0	0	0	0	0	0	0	0	32
10:30 AM	0	43	0	0	0	0	0	0	0	0	0	0	43
10:45 AM	0	41	0	0	0	0	0	0	0	0	0	0	41
11:00 AM	0	46	0	0	0	0	0	0	0	0	0	0	46
11:15 AM	0	49	0	0	0	0	0	0	0	0	0	0	49

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:30 AM	0	48	0	0	0	0	0	0	0	0	0	0	48
11:45 AM	0	44	0	0	0	0	0	0	0	0	0	0	44
12:00 PM	0	39	0	0	0	0	0	0	0	0	0	0	39
12:15 PM	0	36	0	0	0	0	0	0	0	0	0	0	36
12:30 PM	0	35	0	0	0	0	0	0	0	0	0	0	35
12:45 PM	0	25	0	0	0	0	0	0	0	0	0	0	25
1:00 PM	0	41	0	0	0	0	0	0	0	0	0	0	41
1:15 PM	0	53	0	0	0	0	0	0	0	0	0	0	53
1:30 PM	0	53	0	0	0	0	0	0	0	0	0	0	53
1:45 PM	0	34	0	0	0	0	0	0	0	0	0	0	34
2:00 PM	0	43	0	0	0	0	0	0	0	0	0	0	43
2:15 PM	0	34	0	0	0	0	0	0	0	0	0	0	34
2:30 PM	0	37	0	0	0	0	0	0	0	0	0	0	37
2:45 PM	0	36	0	0	0	0	0	0	0	0	0	0	36
3:00 PM	0	40	0	0	0	0	0	0	0	0	0	0	40
3:15 PM	0	16	0	0	0	0	0	0	0	0	0	0	16
3:30 PM	0	28	0	0	0	0	0	0	0	0	0	0	28
3:45 PM	0	44	0	0	0	0	0	0	0	0	0	0	44
4:00 PM	0	30	0	0	0	0	0	0	0	0	0	0	30
4:15 PM	0	53	0	0	0	0	0	0	0	0	0	0	53
4:30 PM	0	33	0	0	0	0	0	0	0	0	0	0	33
4:45 PM	0	22	0	0	0	0	0	0	0	0	0	0	22
5:00 PM	0	28	0	0	0	0	0	0	0	0	0	0	28
5:15 PM	0	26	0	0	0	0	0	0	0	0	0	0	26
5:30 PM	0	29	0	0	0	0	0	0	0	0	0	0	29
5:45 PM	0	24	0	0	0	0	0	0	0	0	0	0	24
6:00 PM	0	13	0	0	0	0	0	0	0	0	0	0	13
6:15 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
6:30 PM	0	11	0	0	0	0	0	0	0	0	0	0	11
6:45 PM	0	14	0	0	0	0	0	0	0	0	0	0	14
7:00 PM	0	15	0	0	0	0	0	0	0	0	0	0	15
7:15 PM	0	32	0	0	0	0	0	0	0	0	0	0	32
7:30 PM	0	24	0	0	0	0	0	0	0	0	0	0	24
7:45 PM	0	13	0	0	0	0	0	0	0	0	0	0	13
8:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
8:15 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
8:30 PM	0	12	0	0	0	0	0	0	0	0	0	0	12
8:45 PM	0	7	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
9:15 PM	0	15	0	0	0	0	0	0	0	0	0	0	15
9:30 PM	0	16	0	0	0	0	0	0	0	0	0	0	16
9:45 PM	0	7	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	9
10:15 PM	0	7	0	0	0	0	0	0	0	0	0	0	7
10:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
10:45 PM	0	10	0	0	0	0	0	0	0	0	0	0	10

QUALITY COUNTS REPORT

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Intersection: NB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
11:15 PM	0	12	0	0	0	0	0	0	0	0	0	0	12
11:30 PM	0	10	0	0	0	0	0	0	0	0	0	0	10
11:45 PM	0	12	0	0	0	0	0	0	0	0	0	0	12

QUALITY COUNTS REPORT
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Intersection:	SB I-95/495 C/D Rd Mainline x
City/State:	Landover MD
Date:	2/4/2015
QCJobNo:	13180916
ClientID:	
Comments:	
PEAK HOUR START	4:30 PM
PEAK HOUR END	5:30 PM
PEAK 15-MIN START	4:45 PM
PEAK 15-MIN END	5:00 PM
PHF	0.91

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7
	T	T					

EBLane7		WBLane1
EBLane6		WBLane2
EBLane5		WBLane3
EBLane4		WBLane4
EBLane3		WBLane5
EBLane2		WBLane6
EBLane1		WBLane7

	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	1896	0	0	0	0	0	0	0	0	1896	0	0	0	1896	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEnterin	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	3.3	0	0	0	0	0	0	0	0	3.3	0	0	0	3.3	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	0	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	0	0	0	0	0	2080	0	0	0	0	0	0	0	0	0	0	0	0	0	2080
Heavy Trucks	0	0	0			0	84	0			0	0	0			0	0	0			84
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	0	0	0	0	0	57	0	0	0	0	0	0	0	0	0	0	0	0	0	57	
12:15 AM	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	58	
12:30 AM	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	48	
12:45 AM	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	58	221
1:00 AM	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	50	214
1:15 AM	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	182
1:30 AM	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	164
1:45 AM	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	125

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/4/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
2:00 AM	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22	97
2:15 AM	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	98
2:30 AM	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32	100
2:45 AM	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	31	112
3:00 AM	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22	112
3:15 AM	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	115
3:30 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	120
3:45 AM	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40	129
4:00 AM	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	38	145
4:15 AM	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	48	163
4:30 AM	0	0	0	0	0	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	54	180
4:45 AM	0	0	0	0	0	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	71	211
5:00 AM	0	0	0	0	0	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0	89	262
5:15 AM	0	0	0	0	0	0	102	0	0	0	0	0	0	0	0	0	0	0	0	0	102	316
5:30 AM	0	0	0	0	0	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0	156	418
5:45 AM	0	0	0	0	0	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	180	527
6:00 AM	0	0	0	0	0	0	212	0	0	0	0	0	0	0	0	0	0	0	0	0	212	650
6:15 AM	0	0	0	0	0	0	246	0	0	0	0	0	0	0	0	0	0	0	0	0	246	794
6:30 AM	0	0	0	0	0	0	265	0	0	0	0	0	0	0	0	0	0	0	0	0	265	903
6:45 AM	0	0	0	0	0	0	295	0	0	0	0	0	0	0	0	0	0	0	0	0	295	1018
7:00 AM	0	0	0	0	0	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0	266	1072
7:15 AM	0	0	0	0	0	0	311	0	0	0	0	0	0	0	0	0	0	0	0	0	311	1137
7:30 AM	0	0	0	0	0	0	328	0	0	0	0	0	0	0	0	0	0	0	0	0	328	1200
7:45 AM	0	0	0	0	0	0	323	0	0	0	0	0	0	0	0	0	0	0	0	0	323	1228
8:00 AM	0	0	0	0	0	0	357	0	0	0	0	0	0	0	0	0	0	0	0	0	357	1319
8:15 AM	0	0	0	0	0	0	339	0	0	0	0	0	0	0	0	0	0	0	0	0	339	1347
8:30 AM	0	0	0	0	0	0	286	0	0	0	0	0	0	0	0	0	0	0	0	0	286	1305
8:45 AM	0	0	0	0	0	0	302	0	0	0	0	0	0	0	0	0	0	0	0	0	302	1284
9:00 AM	0	0	0	0	0	0	325	0	0	0	0	0	0	0	0	0	0	0	0	0	325	1252
9:15 AM	0	0	0	0	0	0	261	0	0	0	0	0	0	0	0	0	0	0	0	0	261	1174
9:30 AM	0	0	0	0	0	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0	225	1113
9:45 AM	0	0	0	0	0	0	231	0	0	0	0	0	0	0	0	0	0	0	0	0	231	1042
10:00 AM	0	0	0	0	0	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0	240	957
10:15 AM	0	0	0	0	0	0	214	0	0	0	0	0	0	0	0	0	0	0	0	0	214	910
10:30 AM	0	0	0	0	0	0	229	0	0	0	0	0	0	0	0	0	0	0	0	0	229	914
10:45 AM	0	0	0	0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	0	0	208	891
11:00 AM	0	0	0	0	0	0	215	0	0	0	0	0	0	0	0	0	0	0	0	0	215	866
11:15 AM	0	0	0	0	0	0	182	0	0	0	0	0	0	0	0	0	0	0	0	0	182	834
11:30 AM	0	0	0	0	0	0	173	0	0	0	0	0	0	0	0	0	0	0	0	0	173	778
11:45 AM	0	0	0	0	0	0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	201	771
12:00 PM	0	0	0	0	0	0	231	0	0	0	0	0	0	0	0	0	0	0	0	0	231	787
12:15 PM	0	0	0	0	0	0	234	0	0	0	0	0	0	0	0	0	0	0	0	0	234	839
12:30 PM	0	0	0	0	0	0	214	0	0	0	0	0	0	0	0	0	0	0	0	0	214	880

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/4/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:45 PM	0	0	0	0	0	0	216	0	0	0	0	0	0	0	0	0	0	0	0	0	216	895
1:00 PM	0	0	0	0	0	0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	228	892
1:15 PM	0	0	0	0	0	0	236	0	0	0	0	0	0	0	0	0	0	0	0	0	236	894
1:30 PM	0	0	0	0	0	0	219	0	0	0	0	0	0	0	0	0	0	0	0	0	219	899
1:45 PM	0	0	0	0	0	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0	233	916
2:00 PM	0	0	0	0	0	0	227	0	0	0	0	0	0	0	0	0	0	0	0	0	227	915
2:15 PM	0	0	0	0	0	0	283	0	0	0	0	0	0	0	0	0	0	0	0	0	283	962
2:30 PM	0	0	0	0	0	0	277	0	0	0	0	0	0	0	0	0	0	0	0	0	277	1020
2:45 PM	0	0	0	0	0	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	270	1057
3:00 PM	0	0	0	0	0	0	302	0	0	0	0	0	0	0	0	0	0	0	0	0	302	1132
3:15 PM	0	0	0	0	0	0	310	0	0	0	0	0	0	0	0	0	0	0	0	0	310	1159
3:30 PM	0	0	0	0	0	0	362	0	0	0	0	0	0	0	0	0	0	0	0	0	362	1244
3:45 PM	0	0	0	0	0	0	350	0	0	0	0	0	0	0	0	0	0	0	0	0	350	1324
4:00 PM	0	0	0	0	0	0	400	0	0	0	0	0	0	0	0	0	0	0	0	0	400	1422
4:15 PM	0	0	0	0	0	0	447	0	0	0	0	0	0	0	0	0	0	0	0	0	447	1559
4:30 PM	0	0	0	0	0	0	449	0	0	0	0	0	0	0	0	0	0	0	0	0	449	1646
4:45 PM	0	0	0	0	0	0	520	0	0	0	0	0	0	0	0	0	0	0	0	0	520	1816
5:00 PM	0	0	0	0	0	0	453	0	0	0	0	0	0	0	0	0	0	0	0	0	453	1869
5:15 PM	0	0	0	0	0	0	474	0	0	0	0	0	0	0	0	0	0	0	0	0	474	1896
5:30 PM	0	0	0	0	0	0	420	0	0	0	0	0	0	0	0	0	0	0	0	0	420	1867
5:45 PM	0	0	0	0	0	0	379	0	0	0	0	0	0	0	0	0	0	0	0	0	379	1726
6:00 PM	0	0	0	0	0	0	343	0	0	0	0	0	0	0	0	0	0	0	0	0	343	1616
6:15 PM	0	0	0	0	0	0	308	0	0	0	0	0	0	0	0	0	0	0	0	0	308	1450
6:30 PM	0	0	0	0	0	0	343	0	0	0	0	0	0	0	0	0	0	0	0	0	343	1373
6:45 PM	0	0	0	0	0	0	308	0	0	0	0	0	0	0	0	0	0	0	0	0	308	1302
7:00 PM	0	0	0	0	0	0	319	0	0	0	0	0	0	0	0	0	0	0	0	0	319	1278
7:15 PM	0	0	0	0	0	0	282	0	0	0	0	0	0	0	0	0	0	0	0	0	282	1252
7:30 PM	0	0	0	0	0	0	252	0	0	0	0	0	0	0	0	0	0	0	0	0	252	1161
7:45 PM	0	0	0	0	0	0	210	0	0	0	0	0	0	0	0	0	0	0	0	0	210	1063
8:00 PM	0	0	0	0	0	0	199	0	0	0	0	0	0	0	0	0	0	0	0	0	199	943
8:15 PM	0	0	0	0	0	0	174	0	0	0	0	0	0	0	0	0	0	0	0	0	174	835
8:30 PM	0	0	0	0	0	0	166	0	0	0	0	0	0	0	0	0	0	0	0	0	166	749
8:45 PM	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	200	739
9:00 PM	0	0	0	0	0	0	189	0	0	0	0	0	0	0	0	0	0	0	0	0	189	729
9:15 PM	0	0	0	0	0	0	179	0	0	0	0	0	0	0	0	0	0	0	0	0	179	734
9:30 PM	0	0	0	0	0	0	183	0	0	0	0	0	0	0	0	0	0	0	0	0	183	751
9:45 PM	0	0	0	0	0	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	149	700
10:00 PM	0	0	0	0	0	0	144	0	0	0	0	0	0	0	0	0	0	0	0	0	144	655
10:15 PM	0	0	0	0	0	0	146	0	0	0	0	0	0	0	0	0	0	0	0	0	146	622
10:30 PM	0	0	0	0	0	0	118	0	0	0	0	0	0	0	0	0	0	0	0	0	118	557
10:45 PM	0	0	0	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	120	528
11:00 PM	0	0	0	0	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0	0	91	475
11:15 PM	0	0	0	0	0	0	95	0	0	0	0	0	0	0	0	0	0	0	0	0	95	424
11:30 PM	0	0	0	0	0	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0	96	402
11:45 PM	0	0	0	0	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	88	370

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/4/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
12:15 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
12:30 AM	0	0	0	0	7	0	0	0	0	0	0	0	7
12:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
1:00 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
1:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
1:30 AM	0	0	0	0	7	0	0	0	0	0	0	0	7
1:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
2:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
2:30 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
2:45 AM	0	0	0	0	10	0	0	0	0	0	0	0	10
3:00 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
3:15 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
3:30 AM	0	0	0	0	8	0	0	0	0	0	0	0	8
3:45 AM	0	0	0	0	7	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	9	0	0	0	0	0	0	0	9
4:15 AM	0	0	0	0	10	0	0	0	0	0	0	0	10
4:30 AM	0	0	0	0	13	0	0	0	0	0	0	0	13
4:45 AM	0	0	0	0	18	0	0	0	0	0	0	0	18
5:00 AM	0	0	0	0	10	0	0	0	0	0	0	0	10
5:15 AM	0	0	0	0	15	0	0	0	0	0	0	0	15
5:30 AM	0	0	0	0	25	0	0	0	0	0	0	0	25
5:45 AM	0	0	0	0	20	0	0	0	0	0	0	0	20
6:00 AM	0	0	0	0	25	0	0	0	0	0	0	0	25
6:15 AM	0	0	0	0	25	0	0	0	0	0	0	0	25
6:30 AM	0	0	0	0	19	0	0	0	0	0	0	0	19
6:45 AM	0	0	0	0	14	0	0	0	0	0	0	0	14
7:00 AM	0	0	0	0	20	0	0	0	0	0	0	0	20
7:15 AM	0	0	0	0	25	0	0	0	0	0	0	0	25
7:30 AM	0	0	0	0	31	0	0	0	0	0	0	0	31
7:45 AM	0	0	0	0	20	0	0	0	0	0	0	0	20
8:00 AM	0	0	0	0	24	0	0	0	0	0	0	0	24
8:15 AM	0	0	0	0	26	0	0	0	0	0	0	0	26
8:30 AM	0	0	0	0	28	0	0	0	0	0	0	0	28
8:45 AM	0	0	0	0	31	0	0	0	0	0	0	0	31
9:00 AM	0	0	0	0	39	0	0	0	0	0	0	0	39
9:15 AM	0	0	0	0	33	0	0	0	0	0	0	0	33
9:30 AM	0	0	0	0	38	0	0	0	0	0	0	0	38
9:45 AM	0	0	0	0	42	0	0	0	0	0	0	0	42
10:00 AM	0	0	0	0	30	0	0	0	0	0	0	0	30
10:15 AM	0	0	0	0	37	0	0	0	0	0	0	0	37
10:30 AM	0	0	0	0	34	0	0	0	0	0	0	0	34
10:45 AM	0	0	0	0	31	0	0	0	0	0	0	0	31
11:00 AM	0	0	0	0	30	0	0	0	0	0	0	0	30

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/4/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:15 AM	0	0	0	0	29	0	0	0	0	0	0	0	29
11:30 AM	0	0	0	0	24	0	0	0	0	0	0	0	24
11:45 AM	0	0	0	0	29	0	0	0	0	0	0	0	29
12:00 PM	0	0	0	0	41	0	0	0	0	0	0	0	41
12:15 PM	0	0	0	0	37	0	0	0	0	0	0	0	37
12:30 PM	0	0	0	0	26	0	0	0	0	0	0	0	26
12:45 PM	0	0	0	0	36	0	0	0	0	0	0	0	36
1:00 PM	0	0	0	0	36	0	0	0	0	0	0	0	36
1:15 PM	0	0	0	0	39	0	0	0	0	0	0	0	39
1:30 PM	0	0	0	0	42	0	0	0	0	0	0	0	42
1:45 PM	0	0	0	0	26	0	0	0	0	0	0	0	26
2:00 PM	0	0	0	0	30	0	0	0	0	0	0	0	30
2:15 PM	0	0	0	0	33	0	0	0	0	0	0	0	33
2:30 PM	0	0	0	0	39	0	0	0	0	0	0	0	39
2:45 PM	0	0	0	0	33	0	0	0	0	0	0	0	33
3:00 PM	0	0	0	0	34	0	0	0	0	0	0	0	34
3:15 PM	0	0	0	0	29	0	0	0	0	0	0	0	29
3:30 PM	0	0	0	0	24	0	0	0	0	0	0	0	24
3:45 PM	0	0	0	0	22	0	0	0	0	0	0	0	22
4:00 PM	0	0	0	0	34	0	0	0	0	0	0	0	34
4:15 PM	0	0	0	0	18	0	0	0	0	0	0	0	18
4:30 PM	0	0	0	0	12	0	0	0	0	0	0	0	12
4:45 PM	0	0	0	0	21	0	0	0	0	0	0	0	21
5:00 PM	0	0	0	0	19	0	0	0	0	0	0	0	19
5:15 PM	0	0	0	0	11	0	0	0	0	0	0	0	11
5:30 PM	0	0	0	0	12	0	0	0	0	0	0	0	12
5:45 PM	0	0	0	0	10	0	0	0	0	0	0	0	10
6:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
6:15 PM	0	0	0	0	10	0	0	0	0	0	0	0	10
6:30 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
6:45 PM	0	0	0	0	17	0	0	0	0	0	0	0	17
7:00 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
7:15 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
7:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
7:45 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
8:00 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
8:15 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
8:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
9:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
9:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
9:30 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
9:45 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
10:00 PM	0	0	0	0	9	0	0	0	0	0	0	0	9
10:15 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
10:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/4/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
10:45 PM	0	0	0	0	5	0	0	0	0	0	0	0	5
11:00 PM	0	0	0	0	5	0	0	0	0	0	0	0	5
11:15 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
11:30 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
11:45 PM	0	0	0	0	5	0	0	0	0	0	0	0	5

QUALITY COUNTS REPORT
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Intersection:	SB I-95/495 C/D Rd Mainline x
City/State:	Landover MD
Date:	2/5/2015
QCJobNo:	13180917
ClientID:	
Comments:	
PEAK HOUR START	4:45 PM
PEAK HOUR END	5:45 PM
PEAK 15-MIN START	5:15 PM
PEAK 15-MIN END	5:30 PM
PHF	0.96

Lane Configuration:	SBLane1	SBLane2	SBLane3	SBLane4	SBLane5	SBLane6	SBLane7
	T	T					

EBLane7	
EBLane6	
EBLane5	
EBLane4	
EBLane3	
EBLane2	
EBLane1	

WBLane1
WBLane2
WBLane3
WBLane4
WBLane5
WBLane6
WBLane7

	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1

PEAK-HOUR VOLUMES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	2055	0	0	0	0	0	0	0	0	2055	0	0	0	2055	0	0

PERCENT HEAVY VEHICLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight	NBEntering	SBEntering	EBEntering	WBEnterin	NBLeaving	SBLeaving	EBLeaving	WBLeaving
0	0	0	0	2.5	0	0	0	0	0	0	0	0	2.5	0	0	0	2.5	0	0

PEAK-HOUR VOLUMES - PEDESTRIANS

North	South	East	West
0	0	0	0

PEAK-HOUR VOLUMES - BICYCLES

NBLeft	NBThru	NBRight	SBLeft	SBThru	SBRight	EBLeft	EBThru	EBRight	WBLeft	WBThru	WBRight
0	0	0	0	0	0	0	0	0	0	0	0

PEAK 15-MIN FLOWRATES

VehicleType	NBLeft	NBThru	NBRight	NBUTurn	NBRTOR	SBLeft	SBThru	SBRight	SBUTurn	SBRTOR	EBLeft	EBThru	EBRight	EBUTurn	EBRTOR	WBLeft	WBThru	WBRight	WBUTurn	WBRTOR	Total
All Vehicles	0	0	0	0	0	0	2144	0	0	0	0	0	0	0	0	0	0	0	0	0	2144
Heavy Trucks	0	0	0			0	40	0			0	0	0			0	0	0			40
Pedestrians		0					0					0					0				0
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0

ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
12:00 AM	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	59	
12:15 AM	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	66	
12:30 AM	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	48	
12:45 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	210
1:00 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	188
1:15 AM	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	42	164
1:30 AM	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	146
1:45 AM	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	24	133
2:00 AM	0	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	33	129

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
2:15 AM	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	23	110
2:30 AM	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	106
2:45 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	119
3:00 AM	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	28	114
3:15 AM	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	117
3:30 AM	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	118
3:45 AM	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	31	112
4:00 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	121
4:15 AM	0	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	41	136
4:30 AM	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	60	169
4:45 AM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0	65	203
5:00 AM	0	0	0	0	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0	0	91	257
5:15 AM	0	0	0	0	0	0	101	0	0	0	0	0	0	0	0	0	0	0	0	0	101	317
5:30 AM	0	0	0	0	0	0	158	0	0	0	0	0	0	0	0	0	0	0	0	0	158	415
5:45 AM	0	0	0	0	0	0	181	0	0	0	0	0	0	0	0	0	0	0	0	0	181	531
6:00 AM	0	0	0	0	0	0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	203	643
6:15 AM	0	0	0	0	0	0	230	0	0	0	0	0	0	0	0	0	0	0	0	0	230	772
6:30 AM	0	0	0	0	0	0	286	0	0	0	0	0	0	0	0	0	0	0	0	0	286	900
6:45 AM	0	0	0	0	0	0	309	0	0	0	0	0	0	0	0	0	0	0	0	0	309	1028
7:00 AM	0	0	0	0	0	0	315	0	0	0	0	0	0	0	0	0	0	0	0	0	315	1140
7:15 AM	0	0	0	0	0	0	294	0	0	0	0	0	0	0	0	0	0	0	0	0	294	1204
7:30 AM	0	0	0	0	0	0	345	0	0	0	0	0	0	0	0	0	0	0	0	0	345	1263
7:45 AM	0	0	0	0	0	0	350	0	0	0	0	0	0	0	0	0	0	0	0	0	350	1304
8:00 AM	0	0	0	0	0	0	326	0	0	0	0	0	0	0	0	0	0	0	0	0	326	1315
8:15 AM	0	0	0	0	0	0	316	0	0	0	0	0	0	0	0	0	0	0	0	0	316	1337
8:30 AM	0	0	0	0	0	0	295	0	0	0	0	0	0	0	0	0	0	0	0	0	295	1287
8:45 AM	0	0	0	0	0	0	280	0	0	0	0	0	0	0	0	0	0	0	0	0	280	1217
9:00 AM	0	0	0	0	0	0	271	0	0	0	0	0	0	0	0	0	0	0	0	0	271	1162
9:15 AM	0	0	0	0	0	0	246	0	0	0	0	0	0	0	0	0	0	0	0	0	246	1092
9:30 AM	0	0	0	0	0	0	261	0	0	0	0	0	0	0	0	0	0	0	0	0	261	1058
9:45 AM	0	0	0	0	0	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0	240	1018
10:00 AM	0	0	0	0	0	0	211	0	0	0	0	0	0	0	0	0	0	0	0	0	211	958
10:15 AM	0	0	0	0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	0	0	208	920
10:30 AM	0	0	0	0	0	0	199	0	0	0	0	0	0	0	0	0	0	0	0	0	199	858
10:45 AM	0	0	0	0	0	0	207	0	0	0	0	0	0	0	0	0	0	0	0	0	207	825
11:00 AM	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0	0	0	0	0	0	167	781
11:15 AM	0	0	0	0	0	0	211	0	0	0	0	0	0	0	0	0	0	0	0	0	211	784
11:30 AM	0	0	0	0	0	0	220	0	0	0	0	0	0	0	0	0	0	0	0	0	220	805
11:45 AM	0	0	0	0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	0	0	208	806
12:00 PM	0	0	0	0	0	0	224	0	0	0	0	0	0	0	0	0	0	0	0	0	224	863
12:15 PM	0	0	0	0	0	0	209	0	0	0	0	0	0	0	0	0	0	0	0	0	209	861
12:30 PM	0	0	0	0	0	0	231	0	0	0	0	0	0	0	0	0	0	0	0	0	231	872
12:45 PM	0	0	0	0	0	0	228	0	0	0	0	0	0	0	0	0	0	0	0	0	228	892
1:00 PM	0	0	0	0	0	0	242	0	0	0	0	0	0	0	0	0	0	0	0	0	242	910

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015
ALL-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turr	WB RTOR	Total	Hourly Totals
1:15 PM	0	0	0	0	0	0	231	0	0	0	0	0	0	0	0	0	0	0	0	0	231	932
1:30 PM	0	0	0	0	0	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0	266	967
1:45 PM	0	0	0	0	0	0	235	0	0	0	0	0	0	0	0	0	0	0	0	0	235	974
2:00 PM	0	0	0	0	0	0	265	0	0	0	0	0	0	0	0	0	0	0	0	0	265	997
2:15 PM	0	0	0	0	0	0	264	0	0	0	0	0	0	0	0	0	0	0	0	0	264	1030
2:30 PM	0	0	0	0	0	0	316	0	0	0	0	0	0	0	0	0	0	0	0	0	316	1080
2:45 PM	0	0	0	0	0	0	272	0	0	0	0	0	0	0	0	0	0	0	0	0	272	1117
3:00 PM	0	0	0	0	0	0	337	0	0	0	0	0	0	0	0	0	0	0	0	0	337	1189
3:15 PM	0	0	0	0	0	0	344	0	0	0	0	0	0	0	0	0	0	0	0	0	344	1269
3:30 PM	0	0	0	0	0	0	341	0	0	0	0	0	0	0	0	0	0	0	0	0	341	1294
3:45 PM	0	0	0	0	0	0	364	0	0	0	0	0	0	0	0	0	0	0	0	0	364	1386
4:00 PM	0	0	0	0	0	0	374	0	0	0	0	0	0	0	0	0	0	0	0	0	374	1423
4:15 PM	0	0	0	0	0	0	380	0	0	0	0	0	0	0	0	0	0	0	0	0	380	1459
4:30 PM	0	0	0	0	0	0	454	0	0	0	0	0	0	0	0	0	0	0	0	0	454	1572
4:45 PM	0	0	0	0	0	0	522	0	0	0	0	0	0	0	0	0	0	0	0	0	522	1730
5:00 PM	0	0	0	0	0	0	490	0	0	0	0	0	0	0	0	0	0	0	0	0	490	1846
5:15 PM	0	0	0	0	0	0	536	0	0	0	0	0	0	0	0	0	0	0	0	0	536	2002
5:30 PM	0	0	0	0	0	0	507	0	0	0	0	0	0	0	0	0	0	0	0	0	507	2055
5:45 PM	0	0	0	0	0	0	457	0	0	0	0	0	0	0	0	0	0	0	0	0	457	1990
6:00 PM	0	0	0	0	0	0	348	0	0	0	0	0	0	0	0	0	0	0	0	0	348	1848
6:15 PM	0	0	0	0	0	0	315	0	0	0	0	0	0	0	0	0	0	0	0	0	315	1627
6:30 PM	0	0	0	0	0	0	347	0	0	0	0	0	0	0	0	0	0	0	0	0	347	1467
6:45 PM	0	0	0	0	0	0	284	0	0	0	0	0	0	0	0	0	0	0	0	0	284	1294
7:00 PM	0	0	0	0	0	0	273	0	0	0	0	0	0	0	0	0	0	0	0	0	273	1219
7:15 PM	0	0	0	0	0	0	293	0	0	0	0	0	0	0	0	0	0	0	0	0	293	1197
7:30 PM	0	0	0	0	0	0	212	0	0	0	0	0	0	0	0	0	0	0	0	0	212	1062
7:45 PM	0	0	0	0	0	0	215	0	0	0	0	0	0	0	0	0	0	0	0	0	215	993
8:00 PM	0	0	0	0	0	0	188	0	0	0	0	0	0	0	0	0	0	0	0	0	188	908
8:15 PM	0	0	0	0	0	0	179	0	0	0	0	0	0	0	0	0	0	0	0	0	179	794
8:30 PM	0	0	0	0	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0	0	152	734
8:45 PM	0	0	0	0	0	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	178	697
9:00 PM	0	0	0	0	0	0	158	0	0	0	0	0	0	0	0	0	0	0	0	0	158	667
9:15 PM	0	0	0	0	0	0	162	0	0	0	0	0	0	0	0	0	0	0	0	0	162	650
9:30 PM	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0	0	0	0	0	0	167	665
9:45 PM	0	0	0	0	0	0	153	0	0	0	0	0	0	0	0	0	0	0	0	0	153	640
10:00 PM	0	0	0	0	0	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	149	631
10:15 PM	0	0	0	0	0	0	161	0	0	0	0	0	0	0	0	0	0	0	0	0	161	630
10:30 PM	0	0	0	0	0	0	126	0	0	0	0	0	0	0	0	0	0	0	0	0	126	589
10:45 PM	0	0	0	0	0	0	113	0	0	0	0	0	0	0	0	0	0	0	0	0	113	549
11:00 PM	0	0	0	0	0	0	103	0	0	0	0	0	0	0	0	0	0	0	0	0	103	503
11:15 PM	0	0	0	0	0	0	108	0	0	0	0	0	0	0	0	0	0	0	0	0	108	450
11:30 PM	0	0	0	0	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	88	412
11:45 PM	0	0	0	0	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0	76	375

QUALITY COUNTS REPORT
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Intersection: SB I-95/495 C/D Rd Mainline x
City/State: Landover MD
Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
12:00 AM	0	0	0	0	7	0	0	0	0	0	0	0	7
12:15 AM	0	0	0	0	9	0	0	0	0	0	0	0	9
12:30 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
12:45 AM	0	0	0	0	8	0	0	0	0	0	0	0	8
1:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
1:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
1:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
1:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	9	0	0	0	0	0	0	0	9
2:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
2:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
2:45 AM	0	0	0	0	8	0	0	0	0	0	0	0	8
3:00 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
3:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
3:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
3:45 AM	0	0	0	0	7	0	0	0	0	0	0	0	7
4:00 AM	0	0	0	0	11	0	0	0	0	0	0	0	11
4:15 AM	0	0	0	0	10	0	0	0	0	0	0	0	10
4:30 AM	0	0	0	0	18	0	0	0	0	0	0	0	18
4:45 AM	0	0	0	0	17	0	0	0	0	0	0	0	17
5:00 AM	0	0	0	0	14	0	0	0	0	0	0	0	14
5:15 AM	0	0	0	0	20	0	0	0	0	0	0	0	20
5:30 AM	0	0	0	0	21	0	0	0	0	0	0	0	21
5:45 AM	0	0	0	0	21	0	0	0	0	0	0	0	21
6:00 AM	0	0	0	0	20	0	0	0	0	0	0	0	20
6:15 AM	0	0	0	0	16	0	0	0	0	0	0	0	16
6:30 AM	0	0	0	0	30	0	0	0	0	0	0	0	30
6:45 AM	0	0	0	0	17	0	0	0	0	0	0	0	17
7:00 AM	0	0	0	0	26	0	0	0	0	0	0	0	26
7:15 AM	0	0	0	0	28	0	0	0	0	0	0	0	28
7:30 AM	0	0	0	0	31	0	0	0	0	0	0	0	31
7:45 AM	0	0	0	0	23	0	0	0	0	0	0	0	23
8:00 AM	0	0	0	0	21	0	0	0	0	0	0	0	21
8:15 AM	0	0	0	0	39	0	0	0	0	0	0	0	39
8:30 AM	0	0	0	0	34	0	0	0	0	0	0	0	34
8:45 AM	0	0	0	0	35	0	0	0	0	0	0	0	35
9:00 AM	0	0	0	0	43	0	0	0	0	0	0	0	43
9:15 AM	0	0	0	0	39	0	0	0	0	0	0	0	39
9:30 AM	0	0	0	0	30	0	0	0	0	0	0	0	30
9:45 AM	0	0	0	0	33	0	0	0	0	0	0	0	33
10:00 AM	0	0	0	0	29	0	0	0	0	0	0	0	29
10:15 AM	0	0	0	0	31	0	0	0	0	0	0	0	31
10:30 AM	0	0	0	0	33	0	0	0	0	0	0	0	33
10:45 AM	0	0	0	0	37	0	0	0	0	0	0	0	37
11:00 AM	0	0	0	0	32	0	0	0	0	0	0	0	32

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
11:15 AM	0	0	0	0	30	0	0	0	0	0	0	0	30
11:30 AM	0	0	0	0	27	0	0	0	0	0	0	0	27
11:45 AM	0	0	0	0	36	0	0	0	0	0	0	0	36
12:00 PM	0	0	0	0	25	0	0	0	0	0	0	0	25
12:15 PM	0	0	0	0	35	0	0	0	0	0	0	0	35
12:30 PM	0	0	0	0	34	0	0	0	0	0	0	0	34
12:45 PM	0	0	0	0	30	0	0	0	0	0	0	0	30
1:00 PM	0	0	0	0	26	0	0	0	0	0	0	0	26
1:15 PM	0	0	0	0	35	0	0	0	0	0	0	0	35
1:30 PM	0	0	0	0	40	0	0	0	0	0	0	0	40
1:45 PM	0	0	0	0	37	0	0	0	0	0	0	0	37
2:00 PM	0	0	0	0	35	0	0	0	0	0	0	0	35
2:15 PM	0	0	0	0	27	0	0	0	0	0	0	0	27
2:30 PM	0	0	0	0	32	0	0	0	0	0	0	0	32
2:45 PM	0	0	0	0	34	0	0	0	0	0	0	0	34
3:00 PM	0	0	0	0	36	0	0	0	0	0	0	0	36
3:15 PM	0	0	0	0	29	0	0	0	0	0	0	0	29
3:30 PM	0	0	0	0	25	0	0	0	0	0	0	0	25
3:45 PM	0	0	0	0	40	0	0	0	0	0	0	0	40
4:00 PM	0	0	0	0	18	0	0	0	0	0	0	0	18
4:15 PM	0	0	0	0	18	0	0	0	0	0	0	0	18
4:30 PM	0	0	0	0	18	0	0	0	0	0	0	0	18
4:45 PM	0	0	0	0	24	0	0	0	0	0	0	0	24
5:00 PM	0	0	0	0	9	0	0	0	0	0	0	0	9
5:15 PM	0	0	0	0	10	0	0	0	0	0	0	0	10
5:30 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	20	0	0	0	0	0	0	0	20
6:00 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
6:15 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
6:30 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
6:45 PM	0	0	0	0	9	0	0	0	0	0	0	0	9
7:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
7:15 PM	0	0	0	0	5	0	0	0	0	0	0	0	5
7:30 PM	0	0	0	0	10	0	0	0	0	0	0	0	10
7:45 PM	0	0	0	0	9	0	0	0	0	0	0	0	9
8:00 PM	0	0	0	0	11	0	0	0	0	0	0	0	11
8:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
8:30 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
8:45 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
9:00 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
9:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
9:30 PM	0	0	0	0	8	0	0	0	0	0	0	0	8
9:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
10:00 PM	0	0	0	0	11	0	0	0	0	0	0	0	11
10:15 PM	0	0	0	0	4	0	0	0	0	0	0	0	4

QUALITY COUNTS REPORT

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Intersection: SB I-95/495 C/D Rd Mainline x

City/State: Landover MD

Date: 2/5/2015

HEAVY-VEHICLE VOLUMES

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
10:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
10:45 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
11:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
11:15 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
11:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
11:45 PM	0	0	0	0	4	0	0	0	0	0	0	0	4

Gorove/Slade
==========

Type: Volume Data
Location: NB I-95/495 On-Ramp from Central Ave
Specific Lo 0 ft from
City/State: Capitol Hei MD
QCJobNo: 13171512
Direction: NB
Comments:

'==========

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week	Hourly Traffic
				15-Jan-15						
12:00 AM				29		29			29	
1:00 AM				49		49			49	
2:00 AM				94		94			94	
3:00 AM				294		294			294	
4:00 AM				557		557			557	
5:00 AM				690		690			690	
6:00 AM				527		527			527	
7:00 AM				420		420			420	
8:00 AM				391		391			391	
9:00 AM				337		337			337	
10:00 AM				367		367			367	
11:00 AM				370		370			370	
12:00 PM				378		378			378	
1:00 PM				325		325			325	
2:00 PM				323		323			323	
3:00 PM				274		274			274	
4:00 PM				346		346			346	
5:00 PM				290		290			290	
6:00 PM				250		250			250	
7:00 PM				256		256			256	
8:00 PM				175		175			175	
9:00 PM				112		112			112	
10:00 PM				58		58			58	
11:00 PM				31		31			31	
Day Total				6943		6943			6943	
ADT				6943		6943			6943	
%Weekday Average				100.00%						
%Week Average				100.00%		100.00%				
AM Peak				5:00 AM		5:00 AM			5:00 AM	
Volume				690		690			690	
PM Peak				12:00 PM		12:00 PM			12:00 PM	
Volume				378		378			378	

Gorove/Slade
==========

Type: Volume Data
Location: SB I-95/495 Off-Ramp to Central Ave
Specific Lo 0 ft from
City/State: Capitol Hei MD
QCJobNo: 13171507
Direction: SB
Comments:

'==========

Start Time	Mon	Tue	Wed	Thu	Fri	Average W	Sat	Sun	Average Week	Hourly Traffic
				15-Jan-15						
12:00 AM				55		55			55	
1:00 AM				87		87			87	
2:00 AM				97		97			97	
3:00 AM				277		277			277	
4:00 AM				517		517			517	
5:00 AM				610		610			610	
6:00 AM				795		795			795	
7:00 AM				572		572			572	
8:00 AM				510		510			510	
9:00 AM				498		498			498	
10:00 AM				529		529			529	
11:00 AM				570		570			570	
12:00 PM				586		586			586	
1:00 PM				590		590			590	
2:00 PM				560		560			560	
3:00 PM				586		586			586	
4:00 PM				533		533			533	
5:00 PM				471		471			471	
6:00 PM				359		359			359	
7:00 PM				284		284			284	
8:00 PM				248		248			248	
9:00 PM				151		151			151	
10:00 PM				88		88			88	
11:00 PM				66		66			66	
Day Total				9639		9639			9639	
ADT				9639		9639			9639	
%Weekday Average				100.00%						
%Week Average				100.00%		100.00%				
AM Peak				6:00 AM		6:00 AM			6:00 AM	
Volume				795		795			795	
PM Peak				1:00 PM		1:00 PM			1:00 PM	
Volume				590		590			590	

Appendix D3

Metrorail Station Capacity Analysis

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

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D3 Metrorail Station Capacity Analysis

A capacity analysis was conducted for the Largo Town Center Metro Station, the station from which the FBI would operate an employee shuttle to/from the Landover site to support employees taking transit to work. The capacity analysis was performed on the vertical elements of the station at each level, the faregate aisles, fare vending machines, and platform areas. Fifteen-minute ridership totals (entries and exits) were obtained for October of 2014 for the station entrance (WMATA 2014a). Note that the capacity analysis tables throughout the TIA appendix include rounding; therefore, values may not add up to the precise value indicated.

D3.1 Methodology

D3.1.1 Vertical Element Methodology

To conduct the vertical element capacity analysis, the volume of passengers using escalators and stairs between the street and mezzanine and mezzanine and platform were compared to their capacity for the existing (or projected) weekday peak 15-minute period of exiting passengers. Capacities and assumptions were based on the *Transit Capacity and Quality of Service Manual (TCQSM)* and previous WMATA studies, including the *Naylor Road Station Access & Capacity Study* (TRB 2013; WMATA 2012).

To calculate 15-minute escalator and stair capacity for each vertical movement at a station, the standard escalator capacity of 90 people per minute and standard stair capacity of 10 people per foot (of width) per minute were multiplied by the number of each and 15 (resulting in a 15-minute capacity of 1,350 passengers per escalator). To calculate 15-minute passenger volumes using each, first a peaking factor of 1.28 was used to adjust peak 15-minute entry and exit volumes to account for uneven distributions over the 15-minute period (i.e., surges of passengers exiting when a train offloads – a value determined by WMATA based on previous station capacity studies). Then, these adjusted volumes were multiplied by the proportion of passengers using escalators, stairs, or elevators. These proportions were based on the following assumptions:

- Five percent of all passengers typically use elevators, according to WMATA,
- When a stair is provided adjacent to an escalator, approximately 10 percent of passengers will use the stair even when the escalator is traveling in the same direction, and
- The overall configuration of the escalators and stairs.

Finally, the volume to capacity (v/c) ratio was calculated for the vertical elements for each vertical movement, separated by those serving entries to the station and those serving exits. A v/c ratio of 0.7 was considered to be "at capacity," in accordance with previous WMATA studies, including the *Naylor Road Station Access & Capacity Study* (WMATA 2012). Table D3-1 summarizes the assumptions used in the vertical element capacity analysis.

Table D3-1: Assumptions Used in Vertical Element Capacity Analysis

Assumption	Value	Source
Peaking Factor	1.28	WMATA
Escalator: Passengers/Minute	90	TCQSM
Stairs: Passengers/Foot/Minute	10	TCQSM
Percent Passengers Using Elevator	5%	WMATA

Source: WMATA (2012); TRB (2013)

D3.1.2 Faregate Aisle Methodology

Similar to the vertical capacity analysis, the peak number of passengers (or projected peak number of passengers) using the faregate aisles in a 15-minute period was compared to the capacity of the faregate aisles. Faregate aisles can accommodate 35 passengers per minute, according to WMATA (2012). To calculate a 15-minute capacity for faregate aisles at the station, this figure was multiplied by the number of regular faregate aisles and 15 minutes. To account for uneven distributions of passengers entering and exiting the station, a peaking factor of 1.28 was applied to the 15-minute ridership. Faregate aisle directions can be adjusted to meet demand throughout the day, and thus entries and exits were analyzed together. ADA faregate aisles were not included in the capacity for each station entrance, given that they are intended to serve passengers with disabilities. The capacity analysis for faregate aisles is reported as a v/c ratio, and the number of faregate aisles necessary to accommodate existing or projected peak entries and exits at a v/c ratio of 0.7, which is considered capacity.

In the future, WMATA plans to upgrade its faregate aisle technology to provide more capacity per minute and new payment forms. Since the new faregate aisle technology is only in the pilot stage and therefore it is unknown whether or not the new technology will in fact be adopted, this analysis uses the current faregate aisle capacity of 35 passengers per minute to provide the most conservative estimates.

D3.1.3 Fare Vending Machine Methodology

The fare vending machine capacity analysis compared the number of existing (or projected) transactions at fare vending machines during the peak 15-minute entering period to the transaction capacity of the fare vending machines. According to WMATA, at end-of-line stations where the majority of passengers are regular commuters, approximately four percent of passengers using a station will use fare vending machines, and the machines can process between 1.5 and 1.67 transactions per minute (WMATA 2014b). Like the vertical element and faregate aisle capacity analyses, a peaking factor of 1.28 was used to account for surges of passengers when trains offload. The capacity analysis for faregate vending machines is reported as a v/c ratio, and includes the number of fare vending machines necessary to accommodate existing (or projected) patronage at a v/c ratio of 0.7, which is considered capacity.

D3.1.4 Platform Area Analysis Methodology

To determine if the area of each station platform is sufficient to accommodate existing (or projected) peak capacity, the space required to accommodate the peak number of passengers entering and exiting a single train was calculated and compared to the net platform area. Net platform areas were calculated by subtracting the area occupied by vertical elements, pylons, benches, advertisements, platform edges, detectable warning panels, and other elements on platforms from the total platform area (WMATA 2015 and site visits in January 2015).

The analysis used existing (or projected) entries and exits for each station's 15-minute peak entry period to account for the highest number of passengers waiting on a platform at a given time. Using the peak headway for the platform being analyzed, the number of people waiting for a single train (entries per train) was calculated along with the number of people exiting a single train (exits per train). To adjust ridership for schedule irregularities and uneven distributions of passengers per train, a missed headway factor of two and a peaking factor of 1.28 were used to adjust entries per train, while the peaking factor only was used to adjust exits per train. A missed headway factor adjusts waiting passenger volume per train for service disruptions when a trip is missed, and therefore the headway is doubled.

Since passengers tend to congregate near vertical elements (stairs and escalators), to account for uneven passenger distribution along the platform, the net platform areas were split into three 200-foot long sections. Each

section was assigned a different weight, 50 percent, 35 percent, and 15 percent, to reflect the percentage of passengers waiting or exiting trains in the respective area. Adjusted entries and exits were multiplied by each platform area's respective weight to determine how many passengers enter and exit per train in each section.

The maximum area occupied by passengers waiting to enter a train and the area occupied by exiting passengers were calculated to ensure that the platform capacity can accommodate both sets of passengers while a train is serving the platform. Using a spacing per passenger of 10 ft^2 (pedestrian level of service B), the remaining unoccupied space in each platform section was calculated. If this figure was negative, the pedestrian level of service was calculated and reported (since it would be less than level of service B). The maximum queue of passengers waiting on the platform was also calculated, by dividing the area occupied by waiting passengers by 200 feet. A list of assumptions used in the platform area analysis is included in table D3-2.

Table D3-2: Assumptions Used in Platform Area Analysis

Assumption	Amount	Unit	Source/ Formula
Missed Headway Factor	2	-	WMATA
Peaking Factor	1.28	-	WMATA
Spacing per Person (LOS B)	10	ft^2/person	WMATA, TCQSM

Source: WMATA (2012); TRB (2013)

D3.2 Existing Condition Metrorail Capacity Analysis

At Largo Town Center Metro Station, there are two sets of vertical elements: those between the platform and mezzanine, and those between the mezzanine and the Kiss & Ride area (on the south side of the station). There is an additional mezzanine exit on the north side of the station that leads to the bus loop, however on this side of the station the mezzanine is at ground level due to the site's terrain. The peak exiting period is between 5:00 PM and 5:15 PM and the peak entering period is between 7:30 AM and 7:45 AM.

Mezzanine-to-Platform Vertical Element Capacity

The mezzanine-to-platform vertical element capacity analysis is detailed in table D3-3.

Table D3-3: Largo Town Center Metro Station Mezzanine-to-Platform Vertical Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	75%	= 1 - #9 - #7
6	Percent Exits Using Escalator	35%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	20%	TCQSM

#	Assumption	Value	Source/Formula
10	Percent Exits Using Stairs	60%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	37	WMATA
12	15-Minute Exits	356	WMATA
13	Adjusted 15-Minute Entries	48	= #11 x #2
14	Adjusted 15-Minute Exits	445	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	36	= #13 x #5
16	Adjusted Exit Escalator Volume	159	= #14 x #6
17	Entry Escalators	2	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	2,700	= #17 x #3 x 15
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**0.01**	= #15 / #19
22	**Exit Escalator V/C**	**0.12**	= #16 / #20
Stairs			
23	Adjusted Entry Stair Volumes	10	= #13 x #9
24	Adjusted Exit Stair Volumes	273	= #14 x #10
25	Stairs	3	Site Visit
26	Stair Width (Feet)	4	WMATA
27	Stair Capacity* (15-Minute)	1,620	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.17**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

Two of the three escalators at Largo Town Center Metro Station typically operate in the upward direction toward the platform (serving entries) as the mezzanine is below the platform and Kiss & Ride, while the adjacent two staircases typically accommodate passengers exiting. The third escalator typically operates in a downward direction toward the mezzanine (serving exits), while the adjacent staircase typically accommodates passengers entering. Approximately 36 passengers would use the two upward escalators to enter the station, while 159 would use the one downward escalator to exit the station during the peak 15-minute period. The resulting volume to capacity (v/c) ratio was 0.01 for the entry escalators and 0.12 for the exit escalator. These v/c ratios are well below 0.7, which is considered capacity.

The three staircases at the station are each paired with an escalator. Two of the escalators operate in the upward direction (serving entries), meaning the staircases are primarily used by exiting passengers. One of the escalators operates in a downward direction (serving exits), meaning the adjacent staircase is likely used by both entering and exiting passengers. Approximately 10 passengers would use the stairs to enter the station, while 273 would use them to exit the station during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With three 4-foot wide staircases, the 15-minue capacity was calculated at 1,620 passengers. Overall, the resulting v/c ratio for the staircases was 0.17. This v/c is well below 0.7, which is considered to be capacity.

Mezzanine-to-Street Vertical Element Capacity

The mezzanine-to-street vertical element capacity analysis is detailed in table D3-4.

Table D3-4: Largo Town Center Metro Station Mezzanine-to-Street Vertical Capacity Calculations

#	Assumption	Amount	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	0%	= 1 - #9 - #7
6	Percent Exits Using Escalator	85%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	95%	TCQSM
10	Percent Exits Using Stairs	10%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	32	WMATA
12	15-Minute Exits	303	WMATA
13	Adjusted 15-Minute Entries	41	= #11 x #2
14	Adjusted 15-Minute Exits	388	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	0	= #13 x #5
16	Adjusted Exit Escalator Volume	330	= #14 x #6
17	Entry Escalators	0	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	0	= #17 x #3 x 15
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**-**	= #15 / #19
22	**Exit Escalator V/C**	**0.24**	= #16 / #20
Stairs			
23	Adjusted Entry Stair Volumes	38	= #13 x #9
24	Adjusted Exit Stair Volumes	39	= #14 x #10
25	Stairs	2	Site Visit
26	Stair Width (Feet)	4.0	WMATA
27	Stair Capacity* (15-Minute)	1,080	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.07**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

The mezzanine-to-street escalator at Largo Town Center Metro Station typically operates in the upward direction toward the street (serving exits), while the adjacent two staircases typically accommodate passengers entering the station traveling downward toward the mezzanine. Passenger volumes using this entrance were estimated using the proportion of passengers who access the station via the Park & Ride and Kiss & Ride (see *Mode of Access to Largo Town Center Metro Station* in the main TIA report), both of which are located on this side of the station. Overall, approximately 330 passengers would use the upward escalators to exit the station during the peak 15-minute period. The resulting volume to capacity (v/c) ratio for the exit escalator was 0.24, well below 0.7, which is considered capacity.

The two staircases at this entrance are adjacent to the escalator. The escalator operates in the upward direction (serving exits), meaning the staircases are primarily used by entering passengers. Approximately 38 passengers would use the staircase to enter the station, while 39 passengers would use them to exit the station during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With two, 4-foot wide staircases, the 15-minute capacity was calculated at 1,080 passengers. Overall, the resulting v/c ratio for the staircase was 0.07, well below 0.7, which is considered to be capacity.

Faregate Aisle Capacity

Largo Town Center Metro Station currently has eleven faregate aisles, including one bi-directional aisle that is ADA-compliant. Overall, the current array of faregate aisles has a v/c ratio of 0.10, well below 0.7, which would be considered capacity. Current ridership levels at the station would necessitate only two regular faregate aisles to function below capacity, and thus the ten that are provided are more than sufficient. Table D3-5 details the assumptions, ridership, and calculations used in the faregate aisle capacity analysis.

Table D3-5: Largo Town Center Metro Station Faregate Aisle Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Faregate: Passengers/Minute	35	WMATA
4	Capacity V/C	0.7	WMATA
Ridership			
5	Entries	37	WMATA
6	Exits	356	WMATA
7	Adjusted Entries	48	= #5 x #2
8	Adjusted Exits	455	= #6 x #2
9	Total Adjusted Volume	503	= #7 + #8
Current Fare Infrastructure			
10	Regular Aisles	10	Site Visit
11	ADA Aisles	1	Site Visit
12	Total Aisles	11	Site Visit
13	Current 15-Minute Capacity	5,250	= #10 x #3 x 15
14	**Current Faregate Aisle V/C**	**0.10**	= #9 / #13
15	**Faregate Aisles Needed**	**2**	= #9 / # 3 / #4 / 15

Fare Vending Machines

Largo Town Center Metro Station has 10 fare vending machines, and therefore can accommodate 251 passengers in a 15-minute period. Approximately 19 passengers could attempt to use them during the peak 15-minute period. This equates to a v/c ratio of 0.07, below the acceptable capacity of 0.7. Using a v/c of 0.7 as capacity, approximately two fare vending machines would be necessary to meet current demand. Table D3-6 summarizes the fare vending machine capacity analysis.

Table D3-6: Largo Town Center Metro Station Fare Vending Machines Capacity Analysis Results

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	7:30 AM to 7:45 AM	WMATA
2	Peaking Factor	1.28	WMATA
3	Percent Passengers Using Fare Vendors	4%	WMATA
4	Fare Vendors: People Per Minute	1.67	WMATA
5	Capacity V/C	0.7	WMATA
Ridership			
6	Entries	327	WMATA
7	Exits	37	WMATA
8	Adjusted Entries	419	= #6 x #2
9	Adjusted Exits	47	= #7 x #2
10	Adjusted Total	466	= #8 + #9
Fare Vendors			
11	Adjusted Fare Vendor Volume	19	= #10 x #3
12	Fare Vendors	10	Site Visit
13	Fare Vendor Capacity	251	= #12 x #4 x 15
14	**Fare Vendor V/C**	**0.07**	= #11 / #13
15	**Fare Vendors Needed**	**2**	= #11 / #4 / #5 / 15

Platform Area Analysis

The peak 15-minute entry period at Largo Town Center Metro Station is 7:30 AM to 7:45 AM. The net platform area was calculated at 13,860 ft², or three 200-foot long sections of 4,620 ft² each. Table D3-7 details the assumptions, ridership, and calculations used in this analysis.

Table D3-7: Largo Town Center Metro Station Platform Area Analysis Assumptions and Calculations

#	Assumption	Amount	Unit	Source/Formula
1	Peak 15-Minute Entries	327	Passengers	WMATA
2	Peak 15-Minute Exits	37	Passengers	WMATA
3	Peak Headway	4	Minutes	WMATA

#	Assumption	Amount	Unit	Source/Formula
4	Trains per 15 Minutes per Direction	3	Trains	= 15 / #3
5	Entries per Train	109	Passengers	= #1 / #4
6	Exits per Train	12	Passengers	= #2 / #4
7	Missed Headway Factor	2	--	WMATA
8	Peaking Factor	1.28	--	WMATA
9	Adjusted Entries per Train	279	Passengers	= #5 x #7 x #8
10	Adjusted Exits per Train	47	Passengers	= #6 x #8
11	Spacing per Person (LOS B)	10	ft^2/person	WMATA
12	Platform Space Available	13,860	ft^2	Station Layout from WMATA

Using a spacing per passenger of 10 ft^2 (Level of Service B), the most trafficked section of platform would have 2,989 ft^2 of unoccupied space, while the second and third most trafficked sections would have 3,478 ft^2 and 4,131 ft^2, respectively. The longest queue of passengers waiting on the platform would be 7.0 feet, significantly shorter than the usable platform width of 27 feet. Table D3-8 details the platform area analysis for the station.

Table D3-8: Largo Town Center Metro Station Platform Waiting Area Analysis

# *	Assumption	Area 1	Area 2	Area 3	Formula
13	Area (ft^2)	4,620	4,620	4,620	= #12 / 3
14	Waiting Passengers	140	98	42	Area 1 = #9 x 0.50 Area 2 = #9 x 0.35 Area 3 = #9 x 0.15
15	Waiting Passenger Area (ft^2)	1,396	977	419	= #14 x #11
16	Waiting Passenger Queue (ft)	7.0	4.9	2.1	= #15 / 200
17	Exiting Passengers	23	16	7	Area 1 = #10 x 0.50 Area 2 = #10 x 0.35 Area 3 = #10 x 0.15
18	Exiting Passenger Area (ft^2)	235	164	70	= #17 x #11
19	Net Area Remaining (ft^2)	2,989	3,478	4,131	= #13 - #15 - #18

*Table continued from table D3-7.

D3.3 No-build Condition Metrorail Capacity Analysis

At Largo Town Center Metro Station, there are two sets of vertical elements: those between the platform and mezzanine, and those between the mezzanine and the Kiss & Ride area (on the south side of the station). There is an additional mezzanine exit on the north side of the station that leads to the bus loop, however on this side of the station the mezzanine is at ground level due to the site's terrain. The projected peak exiting period is between 5:00 PM and 5:15 PM.

Mezzanine-to-Platform Vertical Element Capacity

The mezzanine-to-platform vertical element capacity analysis is detailed in table D2-9.

Table D3-9: Largo Town Center Metro Station Mezzanine-to-Platform Vertical Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	75%	= 1 - #9 - #7
6	Percent Exits Using Escalator	35%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	20%	TCQSM
10	Percent Exits Using Stairs	60%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	48	WMATA
12	15-Minute Exits	423	WMATA
13	Adjusted 15-Minute Entries	61	= #11 x #2
14	Adjusted 15-Minute Exits	541	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	46	= #13 x #5
16	Adjusted Exit Escalator Volume	189	= #14 x #6
17	Entry Escalators	2	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	2,700	= #17 x #3 x 15
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**0.02**	= #15 / #19
22	**Exit Escalator V/C**	**0.14**	= #16 / #20
Stairs			
23	Adjusted Entry Stair Volumes	12	= #13 x #9
24	Adjusted Exit Stair Volumes	325	= #14 x #10
25	Stairs	3	Site Visit
26	Stair Width (Feet)	4.0	WMATA
27	Stair Capacity* (15-Minute)	1,620	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.21**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

Two of the three escalators at Largo Town Center Metro Station typically operate in the upward direction toward the platform (serving entries), while the adjacent two staircases typically accommodate passengers exiting. The third escalator typically operates in a downward direction toward the mezzanine (serving exits), while the adjacent staircase typically accommodates passengers entering. In 2022, approximately 46 passengers would use the two upward escalators to enter the platform, while 189 would use the one downward escalator to exit the platform

during the projected peak 15-minute period. The resulting projected volume to capacity (v/c) ratio was 0.02 for the entry escalators and 0.14 for the exit escalator. These v/c ratios are well below 0.7, which is considered capacity.

The three staircases at the station are each paired with an escalator. Two of the escalators operate in the upward direction (serving entries), meaning the staircases are primarily used by exiting passengers. One of the escalators operates in a downward direction (serving exits), meaning the adjacent staircase is likely used by both entering and exiting passengers. In 2022, approximately 12 passengers would use the stairs to enter the platform, while 325 would use them to exit the platform during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With three, four-foot wide staircases, the 15-minute capacity was calculated at 1,620 passengers. Overall, the resulting projected v/c ratio for the staircases will be 0.21. This v/c is well below 0.7, which is considered to be capacity.

Mezzanine-to-Street Vertical Element Capacity

The mezzanine-to-street vertical element capacity analysis is detailed in table D3-10.

Table D3-10: Largo Town Center Metro Station Mezzanine-to-Street Vertical Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	0%	= 1 - #9 - #7
6	Percent Exits Using Escalator	85%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	95%	TCQSM
10	Percent Exits Using Stairs	10%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	41	WMATA
12	15-Minute Exits	360	WMATA
13	Adjusted 15-Minute Entries	53	= #11 x #2
14	Adjusted 15-Minute Exits	462	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	0	= #13 x #5
16	Adjusted Exit Escalator Volume	392	= #14 x #6
17	Entry Escalators	0	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	0	= #17 x #3 x 15
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**-**	= #15 / #19
22	**Exit Escalator V/C**	**0.29**	= #16 / #20
Stairs			

#	Assumption	Value	Source/Formula
23	Adjusted Entry Stair Volumes	49	= #13 x #9
24	Adjusted Exit Stair Volumes	46	= #14 x #10
25	Stairs	2	Site Visit
26	Stair Width (Feet)	4.0	WMATA
27	Stair Capacity* (15-Minute)	1,080	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.09**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

The mezzanine-to-street escalator at Largo Town Center Metro Station typically operates in the upward direction toward the street (serving exits), while the adjacent two staircases typically accommodate passengers entering the station traveling downward toward the mezzanine. Passenger volumes using this entrance were estimated using the proportion of passengers who access the station via the Park & Ride and Kiss & Ride (WMATA 2013), both of which are located on this side of the station. In 2022, approximately 392 passengers would use the upward escalators to exit the station during the peak 15-minute period. The resulting projected volume to capacity (v/c) ratio for the exit escalator was 0.29, below 0.7, which is considered capacity.

The two staircases at this entrance are adjacent to the escalator. The escalator operates in the upward direction (serving exits), meaning the staircases are primarily used by entering passengers. In 2022, approximately 49 passengers would use the staircase to enter the station, while 46 passengers would use them to exit the station during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With two, four-foot wide staircases, the 15-minute capacity was calculated at 1,080 passengers. Overall, the resulting v/c ratio for the staircase was 0.09, well below 0.7, which is considered to be capacity.

Faregate Aisle Capacity

Largo Town Center Metro Station currently has eleven faregate aisles, including one bi-directional aisle that is ADA-compliant. Overall, the current array of faregate aisles has a projected v/c ratio of 0.11, well below 0.7, which would be considered capacity. Projected ridership levels at the station would necessitate only two regular faregate aisles to function below capacity, and thus the ten that are provided are more than sufficient. Table D3-11 details the assumptions, ridership, and calculations used in the faregate aisle capacity analysis.

Table D3-11: Largo Town Center Metro Station Faregate Aisle Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Faregate: Passengers/Minute	35	WMATA
4	Capacity V/C	0.7	WMATA
Ridership			
5	Entries	48	WMATA
6	Exits	423	WMATA
7	Adjusted Entries	61	= #5 x #2
8	Adjusted Exits	541	= #6 x #2
9	Total Adjusted Volume	602	= #7 + #8

#	Assumption	Value	Source/Formula
Current Fare Infrastructure			
10	Regular Aisles	10	Site Visit
11	ADA Aisles	1	Site Visit
12	Total Aisles	11	Site Visit
13	Current 15-Minute Capacity	5,250	= #10 x #3 x 15
14	**Current Faregate Aisle V/C**	**0.11**	= #9 / #13
15	**Faregate Aisles Needed**	**2**	= #9 / # 3 / #4 / 15

Fare Vending Machines

Largo Town Center Metro Station has 10 fare vending machines, and therefore can accommodate 251 passengers in a 15-minute period. Approximately 22 passengers could attempt to use them during the projected peak 15-minute period. This equates to a projected v/c ratio of 0.09, below the acceptable capacity of 0.7. Using a v/c of 0.7 as capacity, approximately two fare vending machines would be necessary to meet projected demand. Table D3-12 summarizes the fare vending machine capacity analysis.

Table D3-12: Largo Town Center Metro Station Fare Vending Machines Capacity Analysis Results

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	7:30 AM to 7:45 AM	WMATA
2	Peaking Factor	1.28	WMATA
3	Percent Passengers Using Fare Vendors	4%	WMATA
4	Fare Vendors: People Per Minute	1.67	WMATA
5	Capacity V/C	0.7	WMATA
Ridership			
6	Entries	388	WMATA
7	Exits	46	WMATA
8	Adjusted Entries	497	= #6 x #2
9	Adjusted Exits	59	= #7 x #2
10	Adjusted Total	556	= #8 + #9
Fare Vendors			
11	Adjusted Fare Vendor Volume	22	= #10 x #3
12	Fare Vendors	10	Site Visit
13	Fare Vendor Capacity	251	= #12 x #4 x 15
14	**Fare Vendor V/C**	**0.09**	= #11 / #13
15	**Fare Vendors Needed**	**2**	= #11 / #4 / #5 / 15

Platform Area Analysis

The projected peak 15-minute entry period at Largo Town Center Metro Station is 7:30 AM to 7:45 AM. The net platform area was calculated at 13,860 ft², or three 200-foot long sections of 4,620 ft² each. Table D3-13 details the assumptions, ridership, and calculations used in this analysis.

Table D3-13: Largo Town Center Metro Station Platform Area Analysis Assumptions

#	Assumption	Amount	Unit	Source/Formula
1	Peak 15-Minute Entries	388	Passengers	WMATA
2	Peak 15-Minute Exits	46	Passengers	WMATA
3	Peak Headway	4	Minutes	WMATA
4	Trains per 15 Minutes per Direction	3	Trains	= 15 / #3
5	Entries per Train	129	Passengers	= #1 / #4
6	Exits per Train	15	Passengers	= #2 / #4
7	Missed Headway Factor	2	--	WMATA
8	Peaking Factor	1.28	--	WMATA
9	Adjusted Entries per Train	331	Passengers	= #5 x #7 x #8
10	Adjusted Exits per Train	20	Passengers	= #6 x #8
11	Spacing per Person (LOS B)	10	ft^2/person	WMATA
12	Platform Space Available	13,860	ft^2	Station Layout from WMATA

Using a spacing per passenger of 10 ft^2 (Level of Service B), the most trafficked section of platform would have 2,865 ft^2 of unoccupied space, while the second and third most trafficked sections would have 3,391 ft^2 and 4,093 ft^2, respectively. The longest queue of passengers waiting on the platform would be 8.3 feet, significantly shorter than the usable platform width of 27 feet. Table D3-14 details the platform area analysis for the station.

Table D3-14: Largo Town Center Metro Station Platform Waiting Area Calculations

# *	Assumption	Area 1	Area 2	Area 3	Formula
13	Area (ft^2)	4,620	4,620	4,620	= #12 / 3
14	Waiting Passengers	166	116	50	Area 1 = #9 x 0.50 Area 2 = #9 x 0.35 Area 3 = #9 x 0.15
15	Waiting Passenger Area (ft^2)	1,656	1,159	497	= #14 x #11
16	Waiting Passenger Queue (ft)	8.3	5.8	2.5	= #15 / 200
17	Exiting Passengers	10	7	3	Area 1 = #10 x 0.50 Area 2 = #10 x 0.35 Area 3 = #10 x 0.15
18	Exiting Passenger Area (ft^2)	99	69	30	= #17 x #11
19	Net Area Remaining (ft^2)	2,865	3,391	4,093	= #13 - #15 - #18

*Table continued from table D3-13.

D3.4 Build Condition Metrorail Capacity Analysis

At Largo Town Center Metro Station, there are two sets of vertical elements: those between the platform and mezzanine, and those between the mezzanine and the Kiss & Ride area (on the south side of the station). There is an additional mezzanine exit on the north side of the station that leads to the bus loop, however on this side of

the station the mezzanine is at ground level due to the site's terrain. The projected peak exiting period is between 5:00 PM and 5:15 PM.

Mezzanine-to-Platform Vertical Element Capacity

The mezzanine-to-platform vertical element capacity analysis is detailed in table D3-15.

Table D3-15: Largo Town Center Metro Station Mezzanine-to-Platform Vertical Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	75%	= 1 - #9 - #7
6	Percent Exits Using Escalator	35%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	20%	TCQSM
10	Percent Exits Using Stairs	60%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	210	WMATA
12	15-Minute Exits	431	WMATA
13	Adjusted 15-Minute Entries	269	= #11 x #2
14	Adjusted 15-Minute Exits	552	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	201	= #13 x #5
16	Adjusted Exit Escalator Volume	193	= #14 x #6
17	Entry Escalators	2	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	2,700	= #17 x #3 x 15
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**0.07**	= #15 / #19
22	**Exit Escalator V/C**	**0.14**	= #16 / #20
Stairs			
23	Adjusted Entry Stair Volumes	54	= #13 x #9
24	Adjusted Exit Stair Volumes	331	= #14 x #10
25	Stairs	3	Site Visit
26	Stair Width (Feet)	4.0	WMATA
27	Stair Capacity* (15-Minute)	1,620	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.24**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

Two of the three escalators at Largo Town Center Metro Station typically operate in the upward direction toward the platform (serving entries), while the adjacent two staircases typically accommodate passengers exiting. The third escalator typically operates in a downward direction toward the mezzanine (serving exits), while the adjacent staircase typically accommodates passengers entering. In 2022, approximately 201 passengers would use the two upward escalators to enter the platform, while 193 would use the one downward escalator to exit the platform during the projected peak 15-minute period. The resulting projected volume to capacity (v/c) ratio was 0.07 for the entry escalators and 0.14 for the exit escalator. These v/c ratios are well below 0.7, which is considered capacity.

The three staircases at the station are each paired with an escalator. Two of the escalators operate in the upward direction (serving entries), meaning the staircases are primarily used by exiting passengers. One of the escalators operates in a downward direction (serving exits), meaning the adjacent staircase is likely used by both entering and exiting passengers. In 2022, approximately 54 passengers would use the stairs to enter the platform, while 331 would use them to exit the platform during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With three, four-foot wide staircases, the 15-minute capacity was calculated at 1,620 passengers. Overall, the resulting projected v/c ratio for the staircases will be 0.24. This v/c is well below 0.7, which is considered to be capacity.

Mezzanine-to-Street Vertical Element Capacity

The mezzanine-to-street vertical element capacity analysis is detailed in table D3-16.

Table D3-16: Largo Town Center Metro Station Mezzanine-to-Street Vertical Capacity Calculations

#	Assumption	Amount	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Escalator: Passengers/Minute	90	TCQSM
4	Stairs: Passengers/Foot/Minute	10	TCQSM
5	Percent Entries Using Escalator	0%	= 1 - #9 - #7
6	Percent Exits Using Escalator	85%	= 1 - #10 - #8
7	Percent Entries Using Elevator	5%	WMATA
8	Percent Exits Using Elevator	5%	WMATA
9	Percent Entries Using Stairs	95%	TCQSM
10	Percent Exits Using Stairs	10%	TCQSM, Station layout
Ridership			
11	15-Minute Entries	41	WMATA
12	15-Minute Exits	360	WMATA
13	Adjusted 15-Minute Entries	52	= #11 x #2
14	Adjusted 15-Minute Exits	461	= #12 x #2
Escalators			
15	Adjusted Entry Escalator Volume	0	= #13 x #5
16	Adjusted Exit Escalator Volume	392	= #14 x #6
17	Entry Escalators	0	Site Visit
18	Exit Escalators	1	Site Visit
19	Entry Escalator Capacity (15-Minute)	0	= #17 x #3 x 15

#	Assumption	Amount	Source/Formula
20	Exit Escalator Capacity (15-Minute)	1,350	= #18 x #3 x 15
21	**Entry Escalator V/C**	**-**	= #15 / #19
22	**Exit Escalator V/C**	**0.29**	= #16 / #20
	Stairs		
23	Adjusted Entry Stair Volumes	49	= #13 x #9
24	Adjusted Exit Stair Volumes	46	= #14 x #10
25	Stairs	2	Site Visit
26	Stair Width (Feet)	4.0	WMATA
27	Stair Capacity* (15-Minute)	1,080	= #25 x #26 x #4 x 15 x 0.9
28	**Stair V/C**	**0.09**	= (#23 + #24) / #27

*A 10% reduction in capacity is used to account for friction between passengers traveling in different directions.

The mezzanine-to-street escalator at Largo Town Center Metro Station typically operates in the upward direction toward the street (serving exits), while the adjacent two staircases typically accommodate passengers entering the station traveling downward toward the mezzanine. No-build passenger volumes using this entrance were estimated using the proportion of passengers who access the station via the Park & Ride and Kiss & Ride (WMATA 2013), both of which are located on this side of the station. Since Build Condition passengers would use a shuttle bus to reach the proposed site, they would not use this entrance and instead would proceed directly to the bus loop, which is on the same level as the mezzanine. Therefore, Build Condition passengers were not added to No-build passengers for this analysis. In 2022, approximately 392 passengers would use the upward escalators to exit the station during the peak 15-minute period. The resulting projected volume to capacity (v/c) ratio for the exit escalator was 0.29, well below 0.7, which is considered capacity.

The two staircases at this entrance are adjacent to the escalator. The escalator operates in the upward direction (serving exits), meaning the staircases are primarily used by entering passengers. In 2022, approximately 49 passengers would use the staircase to enter the station, while 46 passengers would use them to exit the station during the peak 15-minute period. The 15-minute capacity of each staircase was calculated by multiplying the capacity of 10 people per foot (of width) per minute by 15 minutes and then by 0.9, to account for friction between passengers traveling in opposite directions. With two, four-foot wide staircases, the 15-minute capacity was calculated at 1,080 passengers. Overall, the resulting v/c ratio for the staircase was 0.09, well below 0.7, which is considered to be capacity.

Faregate Aisle Capacity

Largo Town Center Metro Station currently has eleven faregate aisles, including one bi-directional aisle that is ADA-compliant. Overall, the current array of faregate aisles has a projected v/c ratio of 0.16, well below 0.7, which would be considered capacity. Projected ridership levels at the station would necessitate only three regular faregate aisles to function below capacity, and thus the ten that are provided are more than sufficient. Table D3-17 details the assumptions, ridership, and calculations used in the faregate aisle capacity analysis.

Table D3-17: Largo Town Center Metro Station Faregate Aisle Capacity Calculations

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	5:00 PM to 5:15 PM	WMATA
2	Peaking Factor	1.28	WMATA
3	Faregate: Passengers/Minute	35	WMATA

#	Assumption	Value	Source/Formula
4	Capacity V/C	0.7	WMATA
Ridership			
5	Entries	210	WMATA
6	Exits	431	WMATA
7	Adjusted Entries	269	= #5 x #2
8	Adjusted Exits	552	= #6 x #2
9	Total Adjusted Volume	820	= #7 + #8
Current Fare Infrastructure			
10	Regular Aisles	10	Site Visit
11	ADA Aisles	1	Site Visit
12	Total Aisles	11	Site Visit
13	Current 15-Minute Capacity	5,250	= #10 x #3 x 15
14	**Current Faregate Aisle V/C**	**0.16**	= #9 / #13
15	**Faregate Aisles Needed**	**3**	= #9 / # 3 / #4 / 15

Fare Vending Machines

Largo Town Center Metro Station has 10 fare vending machines, and therefore can accommodate 251 passengers in a 15-minute period. Approximately 31 passengers could attempt to use them during the projected peak 15-minute period. This equates to a projected v/c ratio of 0.12, below the acceptable capacity of 0.7. Using a v/c of 0.7 as capacity, approximately two fare vending machines would be necessary to meet projected demand. Table D3-18 summarizes the fare vending machine capacity analysis.

Table D3-18: Largo Town Center Metro Station Fare Vending Machines Capacity Analysis Results

#	Assumption	Value	Source/Formula
1	Peak 15-Minute Period	7:30 AM to 7:45 AM	WMATA
2	Peaking Factor	1.28	WMATA
3	Percent Passengers Using Fare Vendors	4%	WMATA
4	Fare Vendors: People Per Minute	1.67	WMATA
5	Capacity V/C	0.7	WMATA
Ridership			
6	Entries	400	WMATA
7	Exits	202	WMATA
8	Adjusted Entries	511	= #6 x #2
9	Adjusted Exits	259	= #7 x #2
10	Adjusted Total	770	= #8 + #9
Fare Vendors			
11	Adjusted Fare Vendor Volume	31	= #10 x #3
12	Fare Vendors	10	Site Visit
13	Fare Vendor Capacity	251	= #12 x #4 x 15

#	Assumption	Value	Source/Formula
14	**Fare Vendor V/C**	**0.12**	= #11 / #13
15	**Fare Vendors Needed**	**2**	= #11 / #4 / #5 / 15

Platform Area Analysis

The projected peak 15-minute entry period at Largo Town Center Metro Station is 7:30 AM to 7:45 AM. The net platform area was calculated at 13,860 ft², or three 200-foot long sections of 4,620 ft² each. Table D3-19 details the assumptions, ridership, and calculations used in this analysis.

Table D3-19: Largo Town Center Metro Station Platform Area Analysis Assumptions and Calculations

#	Assumption	Amount	Unit	Source/Formula
1	Peak 15-Minute Entries	400	Passengers	WMATA
2	Peak 15-Minute Exits	202	Passengers	WMATA
3	Peak Headway	4	Minutes	WMATA
4	Trains per 15 Minutes per Direction	3	Trains	= 15 / #3
5	Entries per Train	133	Passengers	= #1 / #4
6	Exits per Train	67	Passengers	= #2 / #4
7	Missed Headway Factor	2	--	WMATA
8	Peaking Factor	1.28	--	WMATA
9	Adjusted Entries per Train	341	Passengers	= #5 x #7 x #8
10	Adjusted Exits per Train	86	Passengers	= #6 x #8
11	Spacing per Person (LOS B)	10	ft^2/person	WMATA
12	Platform Space Available	13,860	ft^2	Station Layout from WMATA

Using a spacing per passenger of 10 ft² (Level of Service B), the most trafficked section of platform would have 2,484 ft² of unoccupied space, while the second and third most trafficked sections would have 3,125 ft² and 3,979 ft², respectively. The longest queue of passengers waiting on the platform would be 8.5 feet, significantly shorter than the usable platform width of 27 feet. Table D3-20 details the platform area analysis for the station.

Table D3-20: Largo Town Center Metro Station Platform Waiting Area Analysis

# *	Assumption	Area 1	Area 2	Area 3	Formula
13	Area (ft^2)	4,620	4,620	4,620	= #12 / 3
14	Waiting Passengers	170	119	51	Area 1 = #9 x 0.50 Area 2 = #9 x 0.35 Area 3 = #9 x 0.15
15	Waiting Passenger Area (ft^2)	1,705	1,193	511	= #14 x #11
16	Waiting Passenger Queue (ft)	8.5	6.0	2.6	= #15 / 200
17	Exiting Passengers	43	30	13	Area 1 = #10 x 0.50 Area 2 = #10 x 0.35

# *	Assumption	Area 1	Area 2	Area 3	Formula
					Area 3 = #10 x 0.15
18	Exiting Passenger Area (ft^2)	431	302	129	= #17 x #11
19	Net Area Remaining (ft^2)	2,484	3,125	3,979	= #13 - #15 - #18

*Table continued from table D3-19.

D3.5 References

Transportation Research Board (TRB)

2013 Transit Capacity and Quality of Service Manual, 3rd Edition. Transportation Research Board for the National Academies of Science. Available online at: http://www.trb.org/main/blurbs/169437.aspx, accessed December 19, 2014.

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2012 WMATA Naylor Road Station Access and Capacity Study. Available online at: https://www.wmata.com/pdfs/planning/Naylor%20Road%20Metro%20Station%20Area%20Access%20and%20Capacity%20Study%20Final%20Report.pdf, accessed on January 9, 2015.

2013 Metrorail Passenger Survey. Received June 2, 2014.

2014a Metrorail Station Faregate Data, October 2014. Received December 16, 2014.

2014b Robin McElhenny-Smith and Danielle Wesolek, email on January 27, 2014.

2015 WMATA Station Engineering Design Plans, received on January 7, 2015.

Site Visits

1. Station site visits, FourSquare, January 2015.

Appendix D4

Metrorail Station Evacuation Analysis

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

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D4 Metrorail Station Evacuation Analysis

Although WMATA is not required to meet National Fire Protection Association (NFPA) 130 standards, it requested an evacuation analysis be conducted in order to evaluate evacuation capacities and procedures because WMATA typically performs this analysis for all its station capacity analysis studies.

NFPA 130 details specific requirements for station capacity during emergency situations (TRB 2013). Specifically, the following is required:

- All passengers clear the platform in less than four minutes;
- All passengers must be able to reach a "point of safety" within six minutes;
- Passengers move more quickly on stairs than under normal operating conditions, increasing the capacity from 10 feet per minute to approximately 19 feet per minute; and
- One of the escalators must be assumed to be out of service, and the capacity of the remaining escalators is assumed to be the same as a stair.

D4.1 Methodology

The evacuation analysis uses a number of factors to calculate platform evacuation time and station evacuation time to a point of safety. The number of passengers who would need to evacuate is based on the total amount waiting on the platform for each train multiplied by two (in order to account for a worst-case scenario where a single train headway is missed) and an entire trainload of passengers needing to off-load and exit. Since Largo Town Center Metro Station is an end-of-the-line station, these totals can easily be estimated based on the 15-minute ridership data and the train headway (WMATA 2014a; WMATA 2014b). A peaking factor of 1.28 is also used in order to account for an uneven distribution of passengers on each train within the peak 15-minute period (WMATA 2012). Walking distances between the ends of the platform and vertical elements, vertical elements and faregate aisles, faregate aisles and the station exterior, and walking distances on vertical elements themselves are all factors, as are the flow rates of passengers through vertical elements and fare aisles.

The overall platform evacuation time is calculated by adding the longest walking time on the platform to reach the vertical elements to the waiting time at the vertical elements. The "point of safety" evacuation time is calculated by adding the platform evacuation time to the walking time on the platform-to-mezzanine vertical elements, the walking time between the platform-to-mezzanine vertical elements and the fare aisles, the waiting time at the fare aisles, the walking time between the fare aisles and the mezzanine-to-street vertical elements, and the walking time on the mezzanine-to-street vertical elements. Waiting times only exist if volumes flowing through an element exceed their capacity in the amount of time between when the first passenger reaches them and the last passenger reaches them (see figure D4-1). For example, if it takes three minutes for the last passengers to reach the platform/mezzanine vertical elements at the platform level, then the platform/mezzanine vertical elements have three minutes to clear all passengers to avoid having a waiting time. If there are 500 passengers to clear in this three minutes but only a vertical element that clears 100 passengers per minute, then in three minutes only 300 of the 500 passengers are cleared, and the remaining 200 passengers would form a queue that would take an additional two minutes (waiting time) to clear.

Figure D4-1: NFPA Evacuation Analysis, Walking, and Waiting Times

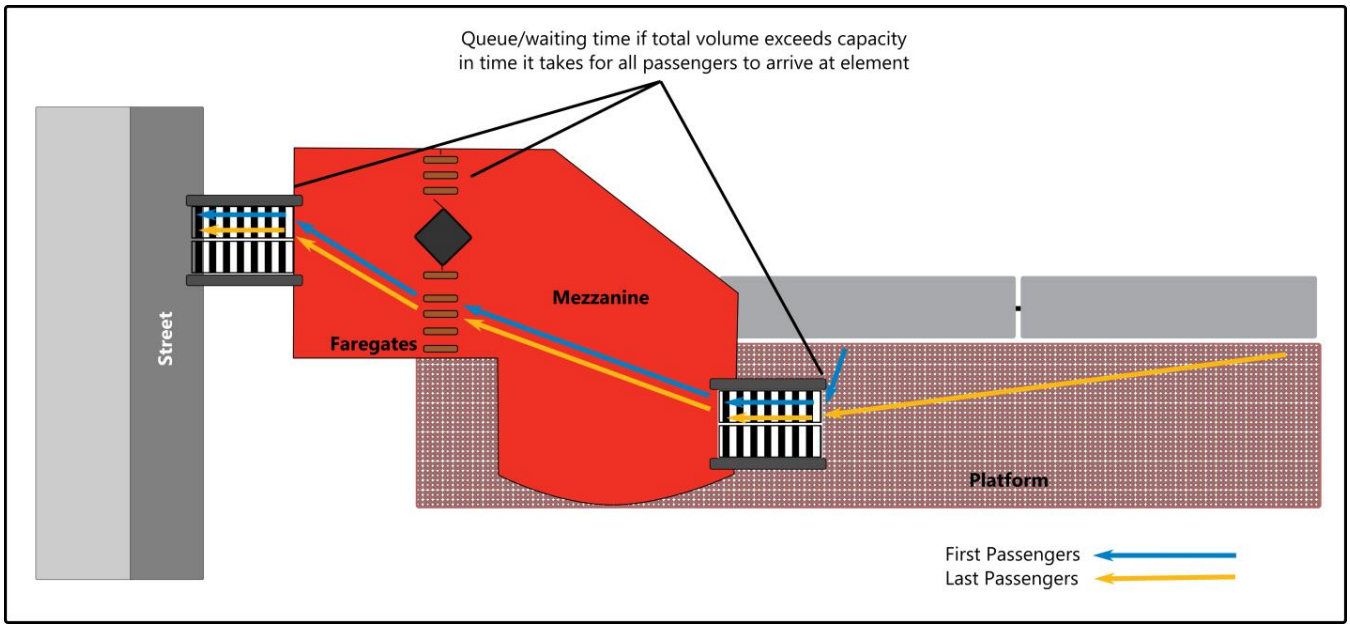

Table D4-1 details the NFPA 130 standards and assumptions used in this analysis. Walking speeds, stair capacity, and fare aisle capacities are all based on NFPA 130 standards. Note that the evacuation analysis tables throughout the TIA appendix include rounding; therefore, values may not add up to the precise value indicated.

Table D4-1: NFPA 130 Inputs and Assumptions

#	Assumption	Amount	Unit	Source/Formula
1	Metrorail Capacity	120	pax/car	WMATA
2	Escalator Width	4	ft	Site Inventory
3	Stair Width	5	ft	Site Inventory
4	Peaking Factor	1.28	-	WMATA
5	Missed Headway Factor	2.0	-	NFPA 130
6	Walking Speed	124	ft/min	NFPA 130
7	Vertical Walking Speed	48	ft/min	NFPA 130
8	Capacity for Stairs	19	pax/ft/min	NFPA 130
9	Fare Aisle Capacity	50	pax/min	NFPA 130
10	ADA and Service Fare Aisle Capacity*	75	pax/min	NFPA 130

*In an evacuation situation, all fare aisles would be opened, and since the ADA aisle is wider than regular aisles, it has a higher capacity.
Note: pax = passengers, ft = feet, min = minute

D4.2 Existing Condition NFPA 130 Evacuation Analysis

The peak period analyzed was between 5:00 PM and 5:15 PM, when 37 passengers enter the station and 356 exit the station. Based on a peak headway of four minutes, three trains would serve the station during the peak 15-minute period. Applying the missed headway factor of 2.0 and the peaking factor of 1.28, the total number of passengers waiting on the platform for train arrivals at one time (adjusted entries per train) is approximately 32 passengers. The maximum number of passengers exiting per train is 152, resulting in 184 passengers who would need to evacuate the station. Table D4-2 details the calculations for adjusted ridership.

Table D4-2: Adjusted Ridership at Largo Town Center Metro Station Evacuation Analysis

#	Ridership Calculations	Amount	Unit	Source/Formula
1	Metrorail Capacity	120	pax/car	WMATA
2	Escalator Width	4	ft	Site Inventory
3	Stair Width	5	ft	Site Inventory
4	Peaking Factor	1.28	-	WMATA
5	Missed Headway Factor	2.0	-	NFPA 130
6	Walking Speed	124	ft/min	NFPA 130
7	Vertical Walking Speed	48	ft/min	NFPA 130
8	Capacity for Stairs	19	pax/ft/min	NFPA 130
9	Fare Aisle Capacity	50	pax/min	NFPA 130
10	ADA Fare Aisle Capacity	75	pax/min	NFPA 130
11	15-Minute Entries	37	Passengers	WMATA
12	15-Minute Exits	356	Passengers	WMATA
13	(Effective) Peak Headway	4	Minutes	WMATA
14	Trains per 15-Minutes	3	Trains	= 15 / #13 (rounded)
15	Entries per Train	12	Passengers	= #11 / #14
16	Exits per Train	119	Passengers	= #12 / #14
17	Adjusted Entries per Train	32	Passengers	= #15 x #4 x #5
18	Adjusted Exits per Train	152	Passengers	= #16 x #4
19	Adjusted Total Passengers per Train	184	Passengers	= #17 + #18

Note: pax = passengers, ft = feet, min = minute

The full NFPA 130 analysis is detailed in table D4-3. Following NFPA 130 standards, only two platform-to-mezzanine escalators would be usable along with the three staircases. This provides sufficient capacity to clear all passengers from the platform without any waiting time. Therefore, the overall platform clearance time would be equal to the maximum walking time of 1.5 minutes between the farthest end of the platform and the platform-to-mezzanine escalators and stairs.

To reach a point of safety, it would take an additional 2.9 minutes of walking time for all passengers to walk down the platform-to-mezzanine escalators and stairs, through the faregate aisles, and out to the bus loop. There would be no waiting time at the fare aisles, as they have sufficient capacity to clear all passengers in the amount of time

it takes all passengers to reach them. Overall, the total time to reach a point of safety is approximately 4.4 minutes.

Table D4-3: NFPA 130 Evacuation Analysis for Largo Town Center Metro Station

Platform to Mezzanine Capacity				
	#	Width (Feet)	Pax/Foot/Min	Pax/Min
Stairs	3	4.0	19	228
Escalators	2	4.0	19	152
Total				**380**

Fare Aisle Capacity				
	#		Pax/Min/Aisle	Pax/Min
ADA Aisle	1		75	75
Regular Aisle	10		50	500
Service Gate	2		75	150
Total				**725**

Walking Time for Last Pax (Excluding Wait Time)					
		Length (Feet)	Feet/Min	Min	Cumulative Minutes
Platform to Platform/Mezzanine Vertical		184	124	1.5	1.5
Platform/Mezzanine Vertical		30	48	0.6	2.1
Platform/Mezzanine Vertical to Fare Aisles*		235	124	1.9	4.0
Fare Aisles to Exit		55	124	0.4	4.4
Mezzanine Vertical			48	0.0	4.4

Walking Time for First Pax (Excluding Wait Time)					
		Length (Feet)	Feet/Min	Min	Cumulative Minutes
Platform to Vertical		10	124	0.1	0.1
Platform Vertical		30	48	0.6	0.7
Mezzanine Vertical to Fare Aisles		131	124	1.1	1.8
Fare Aisles to Exit		55	124	0.4	2.2
Mezzanine Vertical			48	0.0	2.2

Waiting Time						
	Time to Clear (Min)	Pax Cleared	Additional Pax to Clear	Pax/Min	Min	Cumulative Minutes

Platform Vertical	1.4	533	0	380	0.0	0.0
Fare Aisles	2.2	1625	0	725	0.0	0.0
Mezzanine Vertical	2.2	0	184	0	0.0	0.0
Platform Clearance Time	**1.5**					
Point of Safety Time	**4.4**					

*Figure adjusted. Passengers from the far west side of the platform have the longest walking distance to the platform/mezzanine vertical elements, however passengers from the far east side of the platform have the longest walking distance between the platform/mezzanine vertical elements and the faregate aisles.
Note: pax = passengers, ft = feet, min = minutes,
Time to Clear = (Last Passenger Walking Time) - (First Passenger Walking Time) + (Waiting Time at previous element)
Pax Cleared = (Time to Clear) x (Pax/Min)
Additional Pax to Clear = (Adjusted total passengers per train) - (Pax Cleared)
Pax/Min = Total Capacity for Each Element Type
Minutes = (Additional Pax to Clear) / (Pax/Min)

D4.3 No-build Condition NFPA 130 Evacuation Analysis

The projected peak period analyzed was between 5:00 PM and 5:15 PM, when 48 passengers are projected to enter the station and 423 are projected to exit the station. Based on a peak headway of four minutes, three trains would serve the station during the peak 15-minute period. Applying the missed headway factor of 2.0 and the peaking factor of 1.28, the total number of passengers waiting on the platform for train arrivals at one time (adjusted entries per train) would be approximately 41 passengers. The maximum number of passengers exiting per train would be 180, resulting in 221 passengers who would need to evacuate the station. Table D4-4 details the calculations for adjusted ridership.

Table D4-4: Adjusted Ridership at Largo Town Center Metro Station Evacuation Analysis

#	Ridership Calculations	Amount	Unit	Source/Formula
1	Metrorail Capacity	120	pax/car	WMATA
2	Escalator Width	4	ft	Site Inventory
3	Stair Width	5	ft	Site Inventory
4	Peaking Factor	1.28	-	WMATA
5	Missed Headway Factor	2.0	-	NFPA 130
6	Walking Speed	124	ft/min	NFPA 130
7	Vertical Walking Speed	48	ft/min	NFPA 130
8	Capacity for Stairs	19	pax/ft/min	NFPA 130
9	Fare Aisle Capacity	50	pax/min	NFPA 130
10	ADA Fare Aisle Capacity	75	pax/min	NFPA 130
11	15-Minute Entries	48	Passengers	WMATA
12	15-Minute Exits	423	Passengers	WMATA
13	(Effective) Peak Headway	4	Minutes	WMATA
14	Trains per 15-Minutes	3	Trains	= 15 / #13 (rounded)
15	Entries per Train	16	Passengers	= #11 / #14

#	Ridership Calculations	Amount	Unit	Source/Formula
16	Exits per Train	141	Passengers	= #12 / #14
17	Adjusted Entries per Train	41	Passengers	= #15 x #4 x #5
18	Adjusted Exits per Train	180	Passengers	= #16 x #4
19	Adjusted Total Passengers per Train	221	Passengers	= #17 + #18

Note: pax = passengers, ft = feet, min = minutes

The full NFPA 130 analysis is detailed in table D4-5. Following NFPA 130 standards, only two platform-to-mezzanine escalators would be usable along with the three staircases. This provides sufficient capacity to clear all passengers from the platform without any waiting time. Therefore, the overall platform clearance time would be equal to the maximum walking time of 1.5 minutes between the farthest end of the platform and the platform-to-mezzanine escalators and stairs.

To reach a point of safety, it would take an additional 2.9 minutes of walking time for all passengers to walk down the platform-to-mezzanine escalators and stairs, through the faregate aisles, and out to the bus loop. There would be no waiting time at the fare aisles, as they have sufficient capacity to clear all passengers in the amount of time it takes all passengers to reach them. Overall, the total time to reach a point of safety is approximately 4.4 minutes.

Table D4-5: Evacuation Analysis for Largo Town Center Metro Station

Platform to Mezzanine Capacity				
	#	Width (Feet)	Pax/Foot/Min	Pax/Min
Stairs	3	4.0	19	228
Escalators	2	4.0	19	152
Total				**380**

Fare Aisle Capacity				
	#		Pax/Min/Aisle	Pax/Min
ADA Aisle	1		75	75
Regular Aisle	10		50	500
Service Gate	2		75	150
Total				**725**

Walking Time for Last Pax (Excluding Wait Time)					
		Length (Feet)	Feet/Min	Min	Cumulative Minutes
Platform to Platform/Mezzanine Vertical		184	124	1.5	1.5
Platform/Mezzanine Vertical		30	48	0.6	2.1
Platform/Mezzanine Vertical to Fare Aisles*		235	124	1.9	4.0
Fare Aisles to Exit		55	124	0.4	4.4

Mezzanine Vertical			48	0.0	4.4
Walking Time for First Pax (Excluding Wait Time)					
		Length (Feet)	**Feet/Min**	**Min**	**Cumulative Minutes**
Platform to Vertical		10	124	0.1	0.1
Platform Vertical		30	48	0.6	0.7
Mezzanine Vertical to Fare Aisles		131	124	1.1	1.8
Fare Aisles to Exit		55	124	0.4	2.2
Mezzanine Vertical			48	0.0	2.2

Waiting Time						
	Time to Clear (Min)	**Pax Cleared**	**Additional Pax to Clear**	**Pax/Min**	**Min**	**Cumulative Minutes**
Platform Vertical	1.4	533	0	380	0.0	0.0
Fare Aisles	2.2	1,625	0	725	0.0	0.0
Mezzanine Vertical	2.2	0	184	0	0.0	0.0
Platform Clearance Time	**1.5**					
Point of Safety Time	**4.4**					

*Figure adjusted. Passengers from the far west side of the platform have the longest walking distance to the platform/mezzanine vertical elements, however passengers from the far east side of the platform have the longest walking distance between the platform/mezzanine vertical elements and the faregate aisles.
Note: pax = passengers, ft = feet, min = minutes,
Time to Clear = (Last Passenger Walking Time) - (First Passenger Walking Time) + (Waiting Time at previous element)
Pax Cleared = (Time to Clear) x (Pax/Min)
Additional Pax to Clear = (Adjusted total passengers per train) - (Pax Cleared)
Pax/Min = Total Capacity for Each Element Type
Minutes: = (Additional Pax to Clear) / (Pax/Min)

D4.4 Build Condition NFPA 130 Evacuation Analysis

The projected peak period analyzed was between 5:00 PM and 5:15 PM, when 210 passengers are projected to enter the station and 431 are projected to exit the station. Based on a peak headway of four minutes, three trains would serve the station during the peak 15-minute period. Applying the missed headway factor of 2.0 and the peaking factor of 1.28, the total number of passengers waiting on the platform for train arrivals at one time (adjusted entries per train) would be approximately 179 passengers. The maximum number of passengers exiting per train would be 184, resulting in 363 passengers who would need to evacuate the station. Table D4-6 details the calculations for adjusted ridership.

Table D4-6: Adjusted Ridership at Largo Town Center Metro Station Evacuation Analysis

#	Ridership Calculations	Amount	Unit	Source/Formula
1	Metrorail Capacity	120	pax/car	WMATA
2	Escalator Width	4	ft	Site Inventory

#	Ridership Calculations	Amount	Unit	Source/Formula
3	Stair Width	5	ft	Site Inventory
4	Peaking Factor	1.28	-	WMATA
5	Missed Headway Factor	2.0	-	NFPA 130
6	Walking Speed	124	ft/min	NFPA 130
7	Vertical Walking Speed	48	ft/min	NFPA 130
8	Capacity for Stairs	19	pax/ft/min	NFPA 130
9	Fare Aisle Capacity	50	pax/min	NFPA 130
10	ADA Fare Aisle Capacity	75	pax/min	NFPA 130
11	15-Minute Entries	210	Passengers	WMATA
12	15-Minute Exits	431	Passengers	WMATA
13	(Effective) Peak Headway	4	Minutes	WMATA
14	Trains per 15-Minutes	3	Trains	= 15 / #13 (rounded)
15	Entries per Train	70	Passengers	= #11 / #14
16	Exits per Train	144	Passengers	= #12 / #14
17	Adjusted Entries per Train	179	Passengers	= #15 x #4 x #5
18	Adjusted Exits per Train	184	Passengers	= #16 x #4
19	Adjusted Total Passengers per Train	363	Passengers	= #17 + #18

Note: pax = passengers, ft = feet, min = minutes

The full NFPA 130 analysis is detailed in table D4-7. Following NFPA 130 standards, only two platform-to-mezzanine escalators would be usable along with the three staircases. This provides sufficient capacity to clear all passengers from the platform without any waiting time. Therefore, the overall platform clearance time would be equal to the maximum walking time of 1.5 minutes between the farthest end of the platform and the platform-to-mezzanine escalators and stairs.

To reach a point of safety, it would take an additional 2.9 minutes of walking time for all passengers to walk down the platform-to-mezzanine escalators and stairs, through the faregate aisles, and out to the bus loop. There would be no waiting time at the fare aisles, as they have sufficient capacity to clear all passengers in the amount of time it takes all passengers to reach them. Overall, the total time to reach a point of safety is approximately 4.4 minutes.

Table D4-7: Evacuation Analysis for Largo Town Center Metro Station

Platform to Mezzanine Capacity				
	#	Width (Feet)	Pax/Foot/Min	Pax/Min
Stairs	3	4.0	19	228
Escalators	2	4.0	19	152
Total				**380**
Fare Aisle Capacity				
	#		Pax/Min/Aisle	Pax/Min

ADA Aisle	1		75	75
Regular Aisle	10		50	500
Service Gate	2		75	150
Total				**725**

Walking Time for Last Pax (Excluding Wait Time)					
		Length (Feet)	**Feet/Min**	**Min**	**Cumulative Minutes**
Platform to Platform/Mezzanine Vertical		184	124	1.5	1.5
Platform/Mezzanine Vertical		30	48	0.6	2.1
Platform/Mezzanine Vertical to Fare Aisles*		235	124	1.9	4.0
Fare Aisles to Exit		55	124	0.4	4.4

Walking Time for First Pax (Excluding Wait Time)					
		Length (Feet)	**Feet/Min**	**Min**	**Cumulative Minutes**
Platform to Vertical		10	124	0.1	0.1
Platform Vertical		30	48	0.6	0.7
Mezzanine Vertical to Fare Aisles		131	124	1.1	1.8
Fare Aisles to Exit		55	124	0.4	2.2

Waiting Time						
	Time to Clear (Min)	**Pax Cleared**	**Additional Pax to Clear**	**Pax/Min**	**Min**	**Cumulative Minutes**
Platform Vertical	1.4	533	0	380	0.0	0.0
Fare Aisles	2.2	1,625	0	725	0.0	0.0
Platform Clearance Time	**1.5**					
Point of Safety Time	**4.4**					

*Figure adjusted. Passengers from the far west side of the platform have the longest walking distance to the platform/mezzanine vertical elements, however passengers from the far east side of the platform have the longest walking distance between the platform/mezzanine vertical elements and the faregate aisles.
Note: pax = passengers, ft = feet, min = minutes,
Time to Clear = (Last Passenger Walking Time) - (First Passenger Walking Time) + (Waiting Time at previous element)
Pax Cleared = (Time to Clear) x (Pax/Min)
Additional Pax to Clear = (Adjusted total passengers per train) - (Pax Cleared)
Pax/Min = Total Capacity for Each Element Type
Minutes: = (Additional Pax to Clear) / (Pax/Min)

D4.5 References

Transportation Research Board (TRB)

2013 Transit Capacity and Quality of Service Manual, 3rd Edition. Transportation Research Board for the National Academies of Science. Available online at: http://www.trb.org/main/blurbs/169437.aspx, accessed December 19, 2014.

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2014a WMATA Metrorail Station Faregate Data (Largo Town Center), October 2014. Received December 16, 2014.

2014b WMATA Metrorail Frequency. Available online at: http://www.wmata.com/rail/frequency.cfm, accessed December 20, 2014.

Site Visits

1. Station site inventories, FourSquare, December 2014.

Appendix D5

SimTraffic™ Sample Size Determination Statistics

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

D5 SimTraffic™ Sample Size Determination Statistics

D5.1 Summary of Calibration Process

This appendix contains the statistical Excel sheets used to determine the appropriate number of simulation runs. SimTraffic™ was used to calculate the 95th percentile queue length for the approach at each study area intersection because it provides a more robust analysis than Synchro and this is the tool was agreed upon by the parties to the Landover Site Transportation Agreement. The use of SimTraffic™ involved calibrating a model, ensuring the model runs for the appropriate amount of time, and determining the number of simulation runs to be statistically within a plus or minus 5 percent error. The model was calibrated by adjusting link speeds, turning speeds, and vehicle positioning decision points (distance prior to decision point when vehicles position themselves in the correct lane for upcoming moves). The goal was to adjust the model to resemble a simulation closely representing existing conditions. Running the model included a seeding time (time for vehicles to completely travel the network) plus four, 15-minute recording times (totaling 60 minutes). Based on the distance from the farthest points on the network, a 10-minute seed time was applied.

The minimum number of simulation runs was calculated by running the simulation for 10 runs. Based on the results of the 10 runs, the standard deviation was calculated using the vehicle hours of travel (VHT) metric. VHT provides a good indication of vehicle delays by requiring more simulations given facility operation and queuing issues. Using the calculated standard deviation, the number of simulations required was calculated to be within plus or minus 5 percent at the 95th percentile confidence level. Because SimTraffic™ varies quite a bit between runs in terms of VHT, even for small networks, a plus or minus 5 percent error was established. The number of simulation runs to reduce the error to 4 percent would require dozens of runs for little gain in accuracy. In some cases where little congestion occurred, 10 runs achieved better than a plus or minus 5 percent error.

D5.2 Glossary of Sheet Terms

Standard Deviation – a measure that is used to quantify the amount of variation among the data values

Confidence Interval (C.I.) – an interval estimate of a parameter

Confidence Level – a range of values likely to contain the parameter of interest

Percent Error – the range of values above and below the sample statistic (or margin of error)

Number of Samples – minimum number of simulation runs required to be within plus or minus 5 percent error at 95th percentile

Mean – average vehicle hours of travel (VHT)

Required Sample Size Existing Condition AM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	40.1724
Number of Samples	11
95% Confidence Interval	63.8027
Percent Error	**4.7%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	40.1724
Number of Samples	10
Mean	1348.4
95% Confidence Interval	68.2188

Required Sample Size Existing Condition PM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	42.7885
Number of Samples	10
95% Confidence Interval	72.6613
Percent Error	**5.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	42.7885
Number of Samples	11
Mean	1455.64
95% Confidence Interval	67.9576

Required Sample Size No-build Condition AM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	86.4263
Number of Samples	19
95% Confidence Interval	96.957
Percent Error	**5.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	86.4263
Number of Samples	10
Mean	1944.2
95% Confidence Interval	146.765

Required Sample Size No-build Condition PM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	130.921
Number of Samples	16
95% Confidence Interval	162.989
Percent Error	**5.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	130.921
Number of Samples	10
Mean	3264.5
95% Confidence Interval	222.323

Required Sample Size Build Condition AM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	58.4774
Number of Samples	10
95% Confidence Interval	99.3034
Percent Error	**3.2%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	58.4774
Number of Samples	10
Mean	3080.5
95% Confidence Interval	99.3035

Required Sample Size Build Condition PM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	90.3527
Number of Samples	10
95% Confidence Interval	153.432
Percent Error	**4.3%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	90.3527
Number of Samples	10
Mean	3552.5
95% Confidence Interval	153.432

Required Sample Size Build with Mitigation Condition AM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	56.3793
Number of Samples	10
95% Confidence Interval	95.7405
Percent Error	**4.5%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	56.3793
Number of Samples	10
Mean	2145.2
95% Confidence Interval	95.7405

Required Sample Size Build with Mitigation Condition PM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	61.5728
Number of Samples	10
95% Confidence Interval	104.56
Percent Error	**4.5%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	61.5728
Number of Samples	10
Mean	2306.1
95% Confidence Interval	104.56

Appendix D6

Metrobus Capacity Analysis Details

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

D6 Metrobus Capacity Analysis Details

Note that the capacity analysis tables throughout the TIA appendix include rounding; therefore, values may not add up to the precise value indicated.

D6.1 No-build Condition Bus Capacity Analysis Details

To calculate peak hour bus volumes within each study area, the 2014 maximum weekday passenger loads for each route and direction at stops within the study area were averaged by stop. This figure was then multiplied by the number of peak trips per hour to calculate ridership per peak hour by route and direction. These totals were then grown to the year 2022 using the 1.9 percent annual regional growth rate for the bus mode. The 2022 totals were then summed in order to calculate an overall total ridership per peak hour for the study area. To calculate the peak hour capacity of bus services within the study area, the capacity per trip of each bus route during the peak hour was multiplied by the number of trips scheduled in the peak hour. Capacities per trip for each Metrobus route were based on the typical number of seats available on each trip and the WMATA load factor (WMATA 2013a).

Table D6-1 details the No-build Condition peak hour bus capacity analysis for the Landover study area. While there is no overall bus capacity issue in the study area, Metrobus Route F14 in the northbound direction is projected to have minor capacity issues by 2022, as denoted with the red cells.

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Table D6-1: No-build Condition Landover Study Area Bus Capacity Analysis

Route/ Direction	Existing (2014)											2022 No-build					
	AM Max Load	PM Max Load	Seats	Load Factor	Capacity	AM Trips/ Hour	PM Trips/ Hour	AM Volume	PM Volume	AM Capacity	PM Capacity	AM Volume	PM Volume	AM Capacity	PM Capacity	AM V/C	PM V/C
A12 North	17.5	20.3	40	1.1	44	2.7	3.0	46.7	60.8	117.3	132.0	54.1	70.5	117.3	132.0	0.46	0.53
A12 South	12.8	15.8	40	1.1	44	2.7	3.0	34.1	47.5	117.3	132.0	39.6	55.1	117.3	132.0	0.34	0.42
F14 North	41.3	39.5	40	1.1	44	2.0	1.8	82.7	69.2	88.0	77.0	95.9	80.2	88.0	77.0	1.09	1.04
F14 South	23.1	27.7	40	1.1	44	2.0	1.8	46.2	48.5	88.0	77.0	53.6	56.3	88.0	77.0	0.61	0.73
Total								**209.7**	**226.0**	**410.7**	**418.0**	**243.2**	**262.0**	**410.7**	**418.0**	**0.59**	**0.63**

Note: Max = Maximum, Volume = Passenger Volume, V/C = Volume to Capacity Ratio.
Source: WMATA (2013, 2014); MWCOG (2015)

D6.2 Build Condition Bus Capacity Analysis Details

The additional peak hour bus passenger trips associated with the Landover Build Condition were added to the peak hour bus volumes calculated for the study area in the 2022 No-build Condition. The trips were added proportionally to each route within the study area based on No-build ridership. The overall analysis was limited to Metrobus service, as no ridership data was available for TheBus. For the purposes of this analysis, it was assumed that there are no major changes in bus service in the study area by 2022.

To calculate peak hour bus volumes within each study area, the 2014 maximum weekday passenger loads for each route and direction at stops within the study area were averaged by stop. This figure was then multiplied by the number of peak trips per hour to calculate ridership volumes per peak hour by route and direction. These totals were then grown to the year 2022 using the 1.9 percent annual regional growth rate for the bus mode. The 2022 totals were then summed in order to calculate an overall total ridership per peak hour for the study area. To calculate the peak hour capacity of bus services within the study area, the capacity per trip of each bus route during the peak hour was multiplied by the number of trips scheduled in the peak hour. Capacities per trip for each Metrobus route were based on the typical number of seats available on each trip multiplied by the WMATA load factor (WMATA, 2013a).

Table D6-2 details the Build Condition peak hour bus capacity analysis for the Landover study area. While there is no overall bus capacity issue in the study area, Route F14 in the northbound direction is projected to have capacity issues under the Landover Build Condition, as denoted with the red cells.

Table D6-2: Build Condition Landover Study Area Bus Capacity Analysis

Route/ Direction	Existing (2014)											2022 No-build						2022 Build					
	AM Max Load	PM Max Load	Seats	Load Factor	Capacity	AM Trips/ Hour	PM Trips/ Hour	AM Capacity	PM Capacity	AM Total Vol	PM Total Vol	AM Vol	PM Vol	AM Capacity	PM Capacity	AM V/C	PM V/C	AM Trips	PM Trips	AM Total Vol	PM Total Vol	AM V/C	PM V/C
A12 North	17.5	20.3	40	1.1	44	2.7	3.0	117.3	132.0	46.7	60.8	54.1	70.5	117.3	132.0	**0.46**	**0.53**	22.0	24.6	76.1	95.1	**0.65**	**0.72**
A12 South	12.8	15.8	40	1.1	44	2.7	3.0	117.3	132.0	34.1	47.5	39.6	55.1	117.3	132.0	**0.34**	**0.42**	16.1	19.2	55.7	74.3	**0.47**	**0.56**
F14 North	41.3	39.5	40	1.1	44	2.0	1.8	88.0	77.0	82.7	69.2	95.9	80.2	88.0	77.0	**1.09**	**1.04**	39.0	28.0	134.9	108.2	**1.53**	**1.40**
F14 South	23.1	27.7	40	1.1	44	2.0	1.8	88.0	77.0	46.2	48.5	53.6	56.3	88.0	77.0	**0.61**	**0.73**	21.8	19.6	75.4	75.9	**0.86**	**0.99**
Total								**410.7**	**418.0**	**209.7**	**226.0**	**243.2**	**262.0**	**410.7**	**418.0**	**0.59**	**0.63**	**98.9**	**91.4**	**342.1**	**353.4**	**0.83**	**0.85**

Note: Max = Maximum, Vol = Passenger Volume, V/C = Volume to Capacity Ratio.
Source: WMATA (2013, 2014); MWCOG (2015); Landover Site Transportation Agreement (Appendix D4)

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D6.3 References

Metropolitan Washington Council of Governments (MWCOG)

2015 Round 8.3 Regional Growth Rates by Mode, 2008-2025. Received on January 20, 2015.

Washington Metropolitan Area Transportation Authority (WMATA)

2013 WMATA Title VI Service Standards, Policies, and Definitions. Available online at: http://www.wmata.com/about_metro/board_of_directors/board_docs/091213_3BTitleVI.pdf, accessed on February 14, 2015.

2014 Metrobus Automatic Passenger Counter (APC) data, October 2014. Received November 19, 2014.

Appendix D7

NCHRP 684 Worksheets

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	GSA
Project Location:	Landover Site	**Performed By:**	LBG
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	202,000	SQ Feet	336	302	34
Retail	820	202,000	SQ Feet	239	148	91
Restaurant				0		
Cinema/Entertainment				0		
Residential	PG County	210	units	27	10	17
Hotel				0		
All Other Land Uses[2]				0		
Total				602	460	142

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	0	0	0	0
Retail	12		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	602	460	142
Internal Capture Percentage	7%	5%	15%
External Vehicle-Trips[3]	558	438	120
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	4%	29%
Retail	7%	13%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	GSA
Project Location:	Landover Site	**Performed By:**	LBG
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	202,000	SQ Feet	374	71	303
Retail	820	202,000	SQ Feet	960	461	499
Restaurant				0		
Cinema/Entertainment				0		
Residential	PG County	210	units	33	21	12
Hotel				0		
All Other Land Uses[2]				0		
Total				1367	553	814

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	0	0	1	0
Retail	10		0	0	10	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,367	553	814
Internal Capture Percentage	9%	11%	8%
External Vehicle-Trips[3]	1,241	490	751
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	14%	13%
Retail	9%	4%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	52%	42%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	FBI Consolidation EIS
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	302	302	1.00	34	34
Retail	1.00	148	148	1.00	91	91
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	10	10	1.00	17	17
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	21	0	0	0
Retail	26		12	0	13	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	3	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		47	0	0	0	0
Retail	12		0	0	0	0
Restaurant	42	12		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	9	25	0	0		0
Hotel	9	6	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	12	290	302	290	0	0
Retail	10	138	148	138	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	10	10	10	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	10	24	34	24	0	0
Retail	12	79	91	79	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	17	17	17	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	FBI Consolidation EIS
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	71	71	1.00	303	303
Retail	1.00	461	461	1.00	499	499
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	21	21	1.00	12	12
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		61	12	0	6	0
Retail	10		145	20	130	25
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	3	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	0	0	1	0
Retail	22		0	0	10	0
Restaurant	21	231		0	3	0
Cinema/Entertainment	4	18	0		1	0
Residential	40	46	0	0		0
Hotel	0	9	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	10	61	71	61	0	0
Retail	42	419	461	419	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	11	10	21	10	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	38	265	303	265	0	0
Retail	20	479	499	479	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	7	12	7	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	LBG
Project Location:	Landover Site	**Performed By:**	GSA
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	80,000	SQ Feet	160	144	16
Retail	820	9,000	SQ Feet	36	22	14
Restaurant	931	10,000	SQ Feet	8	4	4
Cinema/Entertainment				0		
Residential	PG County	318	units	165	31	134
Hotel				0		
All Other Land Uses[2]				0		
Total				369	201	168

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	1	0	0	0
Retail	4		2	0	1	0
Restaurant	1	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	1	1	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	369	201	168
Internal Capture Percentage	10%	9%	11%
External Vehicle-Trips[3]	331	182	149
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	6%	31%
Retail	27%	50%
Restaurant	100%	50%
Cinema/Entertainment	N/A	N/A
Residential	3%	4%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	GSA
Project Location:	Landover Site	**Performed By:**	FBI
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	80,000	SQ Feet	148	28	120
Retail	820	9,000	SQ Feet	119	57	62
Restaurant	931	10,000	SQ Feet	75	50	25
Cinema/Entertainment				0		
Residential	PG County	318	units	191	124	67
Hotel				0		
All Other Land Uses[2]				0		
Total				533	259	274

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		5	1	0	2	0
Retail	1		15	0	16	0
Restaurant	1	10		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	6	7	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	533	259	274
Internal Capture Percentage	27%	28%	26%
External Vehicle-Trips[3]	389	187	202
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	18%	7%
Retail	37%	52%
Restaurant	46%	64%
Cinema/Entertainment	N/A	N/A
Residential	19%	24%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	FBI Consolidation EIS
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	144	144	1.00	16	16
Retail	1.00	22	22	1.00	14	14
Restaurant	1.00	4	4	1.00	4	4
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	31	31	1.00	134	134
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	10	0	0	0
Retail	4		2	0	2	0
Restaurant	1	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	1	27	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	1	0	0	0
Retail	6		2	0	1	0
Restaurant	20	2		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	4	4	1	0		0
Hotel	4	1	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	8	136	144	136	0	0
Retail	6	16	22	16	0	0
Restaurant	4	0	4	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	30	31	30	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	5	11	16	11	0	0
Retail	7	7	14	7	0	0
Restaurant	2	2	4	2	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	129	134	129	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	FBI Consolidation EIS
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	28	28	1.00	120	120
Retail	1.00	57	57	1.00	62	62
Restaurant	1.00	50	50	1.00	25	25
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	124	124	1.00	67	67
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		24	5	0	2	0
Retail	1		18	2	16	3
Restaurant	1	10		2	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	3	28	14	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		5	1	0	5	0
Retail	9		15	0	57	0
Restaurant	8	29		0	20	0
Cinema/Entertainment	2	2	2		5	0
Residential	16	6	7	0		0
Hotel	0	1	3	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	5	23	28	23	0	0
Retail	21	36	57	36	0	0
Restaurant	23	27	50	27	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	23	101	124	101	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	8	112	120	112	0	0
Retail	32	30	62	30	0	0
Restaurant	16	9	25	9	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	16	51	67	51	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	GSA
Project Location:	Landover Site	**Performed By:**	LBG
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				1183	1065	118
Retail				102	63	39
Restaurant				0		
Cinema/Entertainment				0		
Residential				653	127	526
Hotel				191	113	78
All Other Land Uses[2]				0		
Total				2129	1368	761

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	0	0	0	0
Retail	11		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	5	0	0		0
Hotel	32	3	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,129	1,368	761
Internal Capture Percentage	8%	6%	11%
External Vehicle-Trips[3]	1,959	1,283	676
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	5%	17%
Retail	44%	36%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	0%	45%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	FBI Consolidation EIS	**Organization:**	GSA
Project Location:	Landover Site	**Performed By:**	LBG
Scenario Description:	No-build Condition	**Date:**	
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	975,000	SQ feet	1170	221	949
Retail	820	50,000	SQ Feet	377	181	196
Restaurant				0		
Cinema/Entertainment				0		
Residential	PG County	1,063	units	759	493	266
Hotel	310	360	rooms	216	110	106
All Other Land Uses[2]				0		
Total				2522	1005	1517

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	0	0	19	0
Retail	4		0	0	51	10
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	18	0	0		8
Hotel	0	4	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,522	1,005	1,517
Internal Capture Percentage	11%	14%	9%
External Vehicle-Trips[3]	2,244	866	1,378
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	7%	3%
Retail	20%	33%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	14%	14%
Hotel	16%	4%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	FBI Consolidation EIS
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	1065	1065	1.00	118	118
Retail	1.00	63	63	1.00	39	39
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	127	127	1.00	526	526
Hotel	1.00	113	113	1.00	78	78

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		33	74	0	1	0
Retail	11		5	0	5	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	5	105	0		0
Hotel	59	11	7	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	0	0	0	0
Retail	43		0	0	3	0
Restaurant	149	5		0	6	5
Cinema/Entertainment	0	0	0		0	0
Residential	32	11	0	0		0
Hotel	32	3	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	54	1011	1065	1011	0	0
Retail	28	35	63	35	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	124	127	124	0	0
Hotel	0	113	113	113	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	20	98	118	98	0	0
Retail	14	25	39	25	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	16	510	526	510	0	0
Hotel	35	43	78	43	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	FBI Consolidation EIS
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	221	221	1.00	949	949
Retail	1.00	181	181	1.00	196	196
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	493	493	1.00	266	266
Hotel	1.00	110	110	1.00	106	106

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		190	38	0	19	0
Retail	4		57	8	51	10
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	112	56	0		8
Hotel	0	17	72	0	2	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	0	0	20	0
Retail	69		0	0	227	19
Restaurant	66	91		0	79	78
Cinema/Entertainment	13	7	0		20	1
Residential	126	18	0	0		13
Hotel	0	4	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	15	206	221	206	0	0
Retail	36	145	181	145	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	70	423	493	423	0	0
Hotel	18	92	110	92	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	33	916	949	916	0	0
Retail	65	131	196	131	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	37	229	266	229	0	0
Hotel	4	102	106	102	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix D8

Background Distributions

Federal Bureau of Investigation Headquarters Consolidation

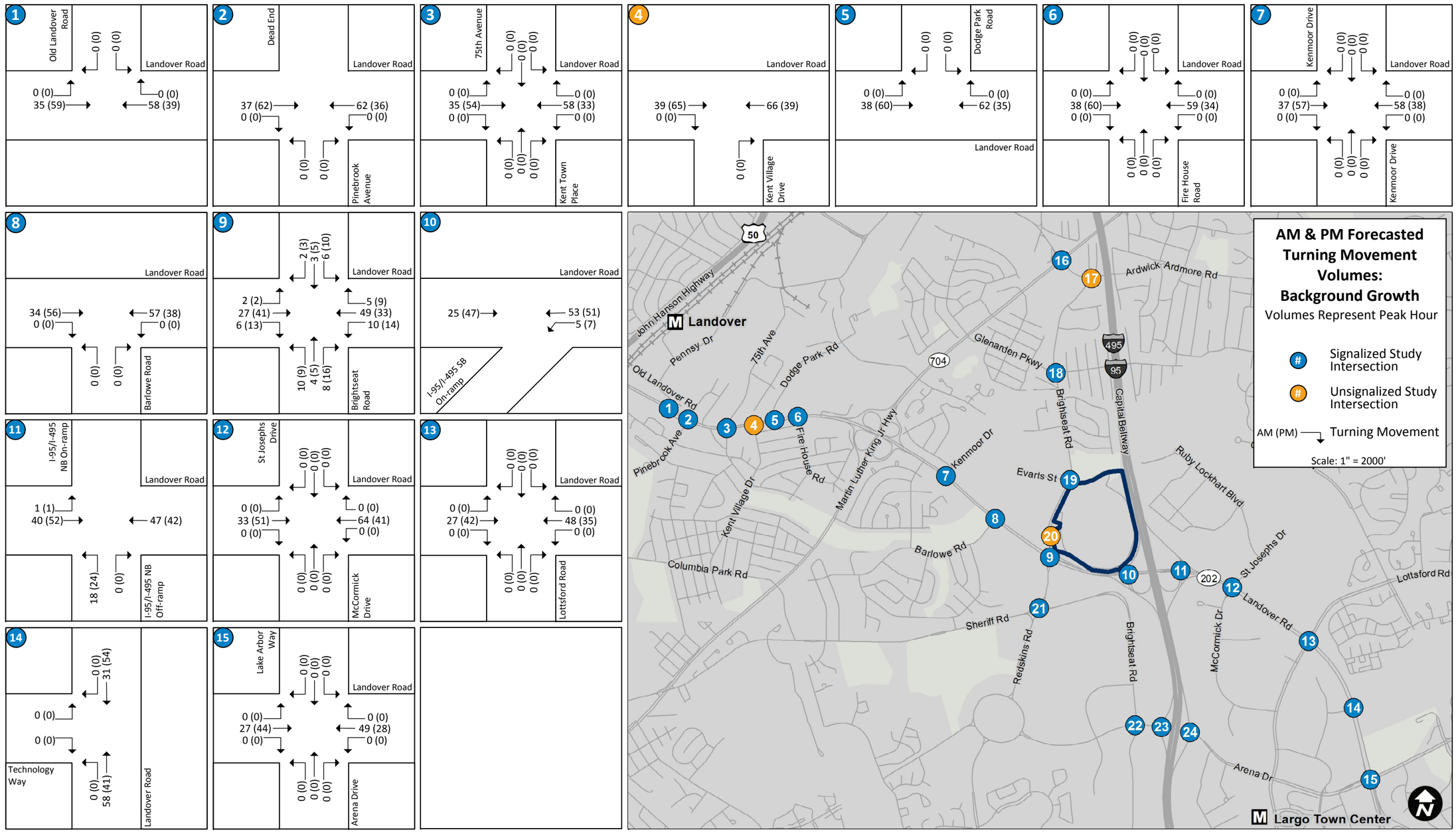
Draft Transportation Impact Assessment

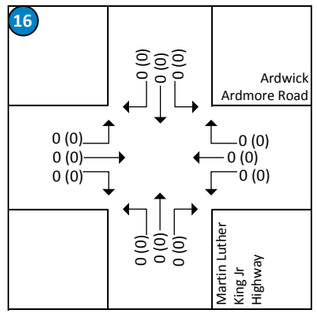
Landover Site Alternative

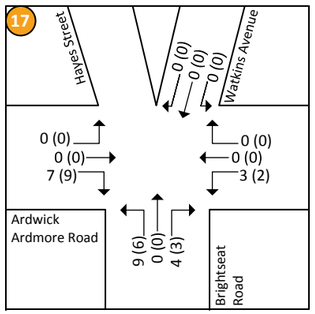
Prepared by

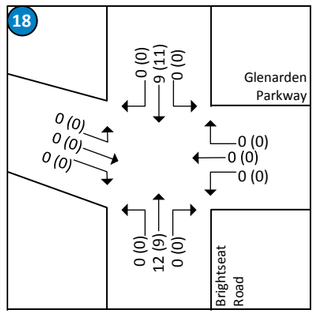
for

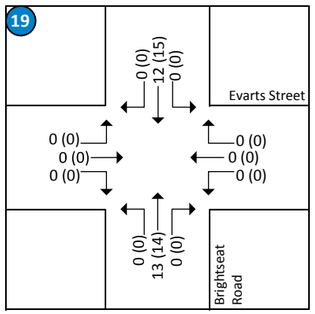
October 2015

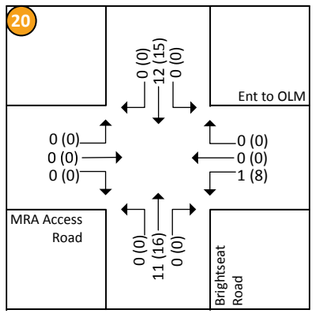

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
35 (59)
0 (0)
58 (39)
2
Dead End
Landover Road
37 (62)
0 (0)
62 (36)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
0 (0)
35 (54)
0 (0)
58 (33)
0 (0)
Kent Town Place
4
Landover Road
39 (65)
0 (0)
66 (39)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
0 (0)
38 (60)
62 (35)
6
Landover Road
0 (0)
38 (60)
0 (0)
59 (34)
Fire House Road
7
Kenmoor Drive
Landover Road
0 (0)
37 (57)
0 (0)
58 (38)
Kenmoor Drive
8
Landover Road
34 (56)
0 (0)
57 (38)
0 (0)
Barlowe Road
9
Landover Road
2 (3)
3 (5)
6 (10)
2 (2)
27 (41)
6 (13)
5 (9)
49 (33)
10 (14)
10 (9)
4 (5)
8 (16)
Brightseat Road
10
Landover Road
25 (47)
53 (51)
5 (7)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
1 (1)
40 (52)
47 (42)
18 (24)
0 (0)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
33 (51)
0 (0)
64 (41)
0 (0)
McCormick Drive
13
Landover Road
0 (0)
27 (42)
0 (0)
48 (35)
0 (0)
Lottsford Road
14
0 (0)
31 (54)
0 (0)
0 (0)
58 (41)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
0 (0)
27 (44)
0 (0)
49 (28)
0 (0)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
704
Glenarden Pkwy
Ardwick Ardmore Rd
Brightseat Rd
Evarts St
Ruby Lockhart Blvd
Capital Beltway
495
95
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes: Background Growth
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

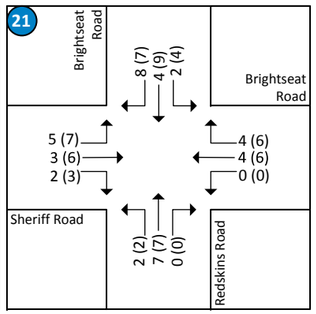


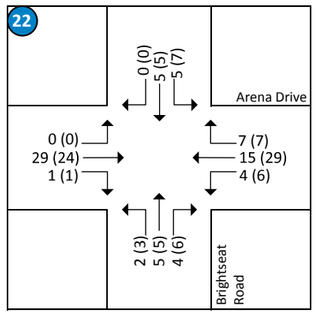


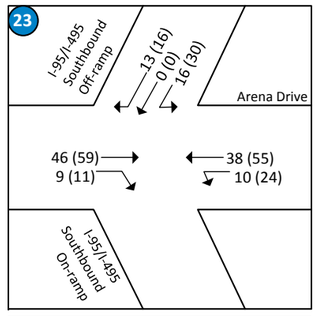


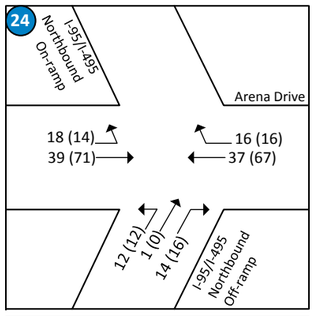












FUTURE
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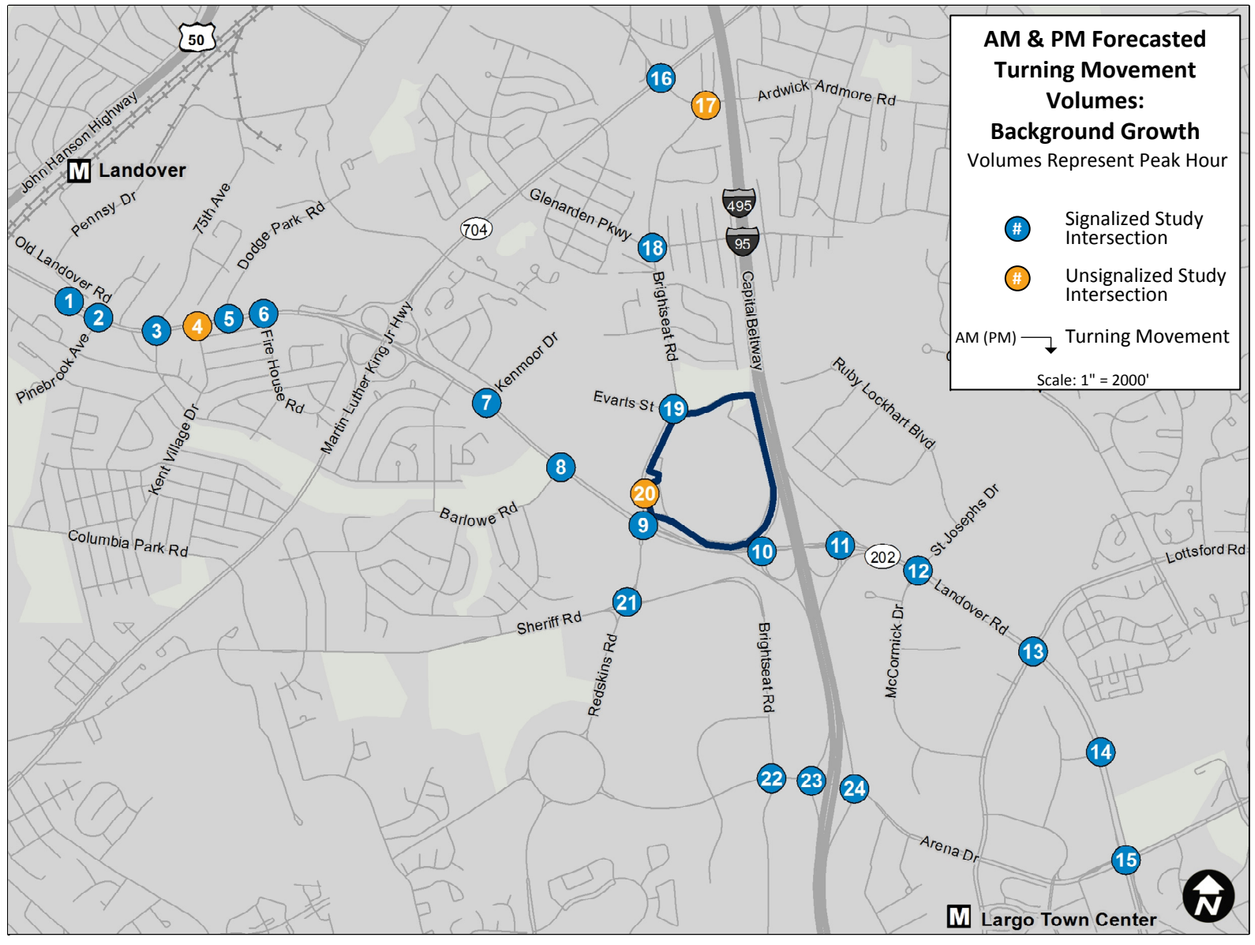

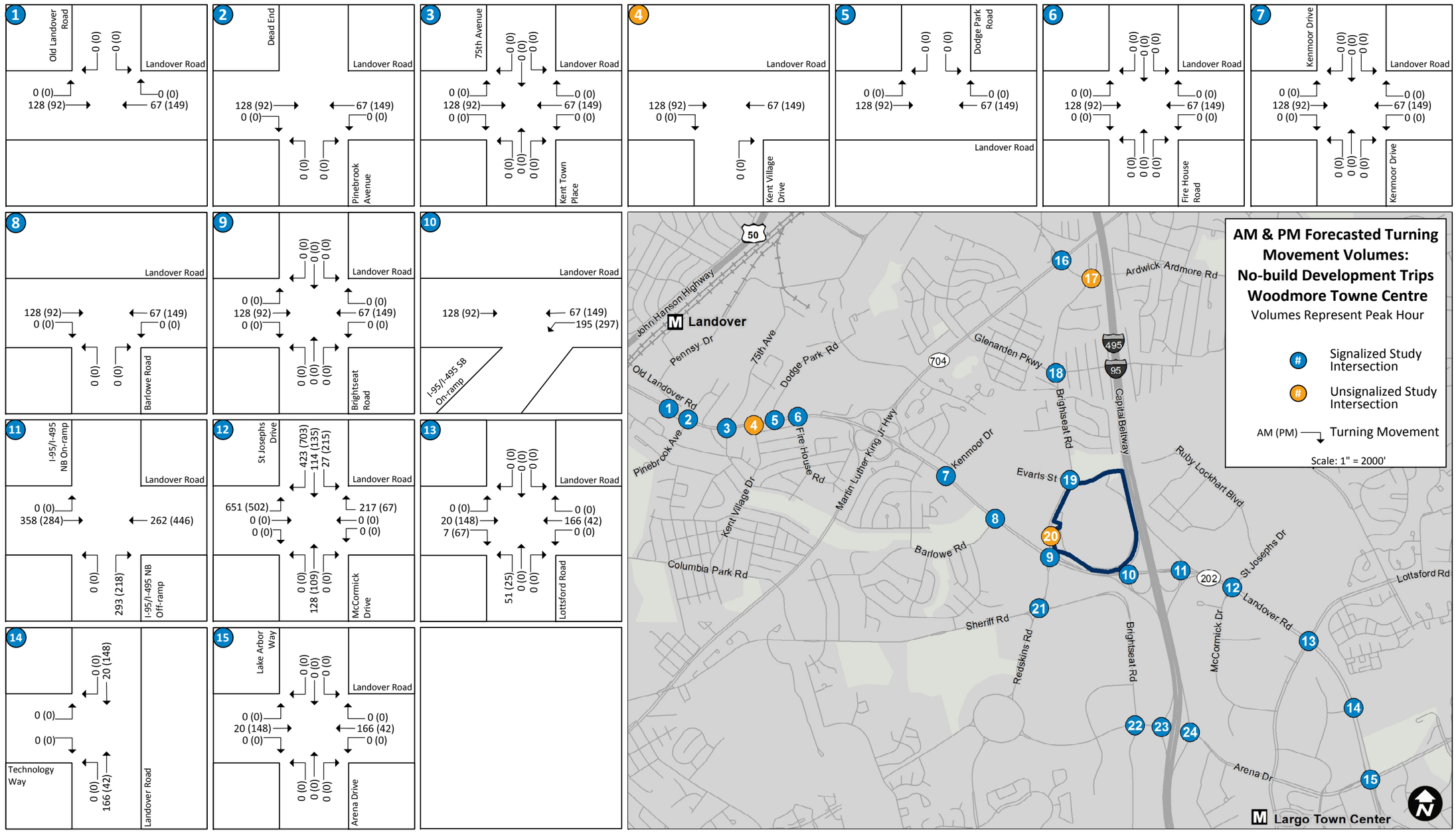
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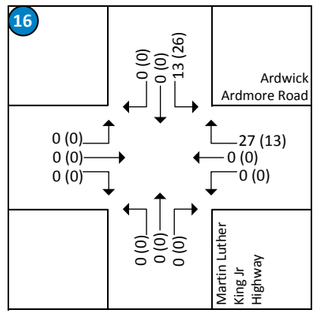
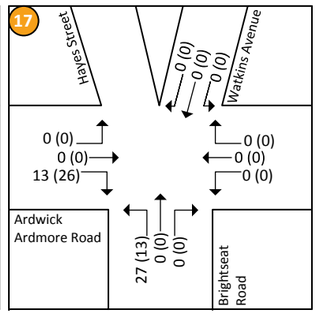
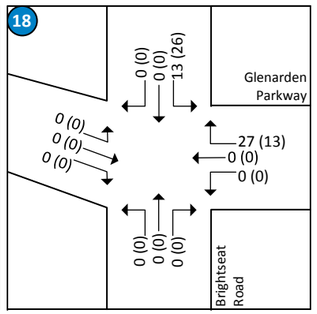
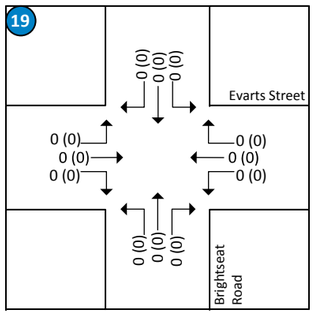
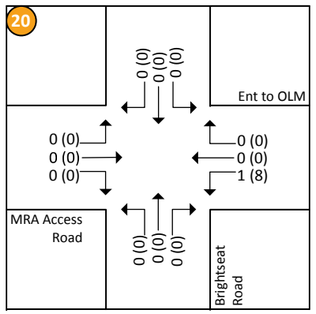
Old Landover Road
0 (0)
0 (0)
Landover Road
0 (0)
128 (92)
0 (0)
67 (149)
2
Dead End
Landover Road
128 (92)
0 (0)
67 (149)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
128 (92)
0 (0)
67 (149)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
128 (92)
67 (149)
195 (297)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
0 (0)
358 (284)
262 (446)
0 (0)
293 (218)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
423 (703)
114 (135)
27 (215)
Landover Road
651 (502)
217 (67)
0 (0)
128 (109)
McCormick Drive
13
Landover Road
0 (0)
20 (148)
7 (67)
166 (42)
51 (25)
Lottsford Road
14
0 (0)
20 (148)
Technology Way
166 (42)
Landover Road
15
Lake Arbor Way
Landover Road
20 (148)
166 (42)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
704
Glenarden Pkwy
Kenmoor Dr
Ardwick Ardmore Rd
Brightseat Rd
495
95
Capital Beltway
Ruby Lockhart Blvd
Evarts St
Barlowe Rd
Columbia Park Rd
202
St Josephs Dr
Lottsford Rd
Landover Rd
Sheriff Rd
Redskins Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Woodmore Towne Centre
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

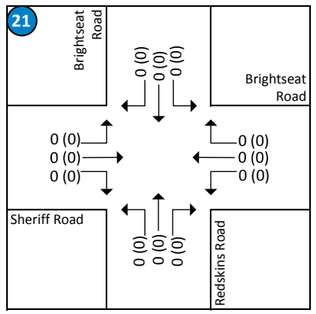


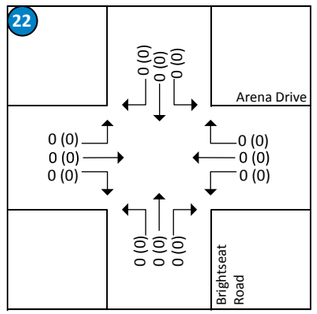


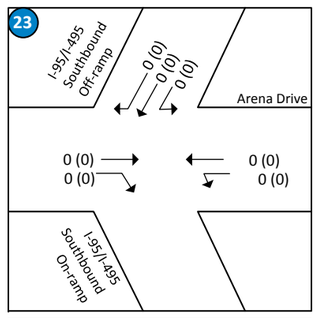


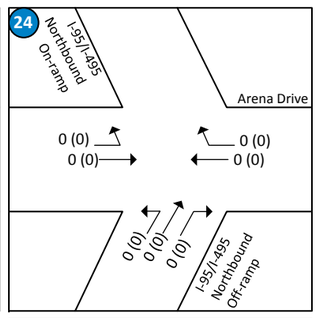












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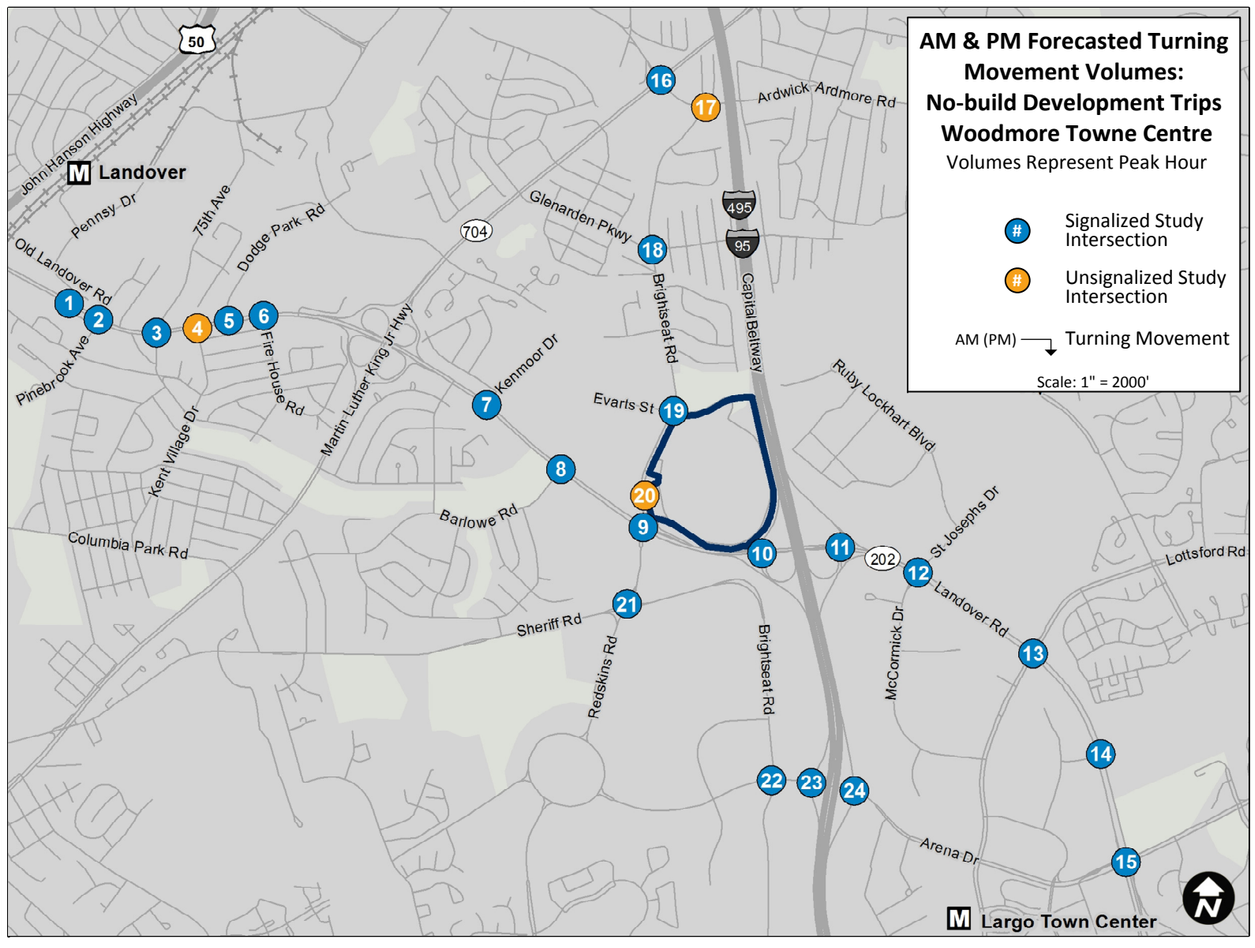
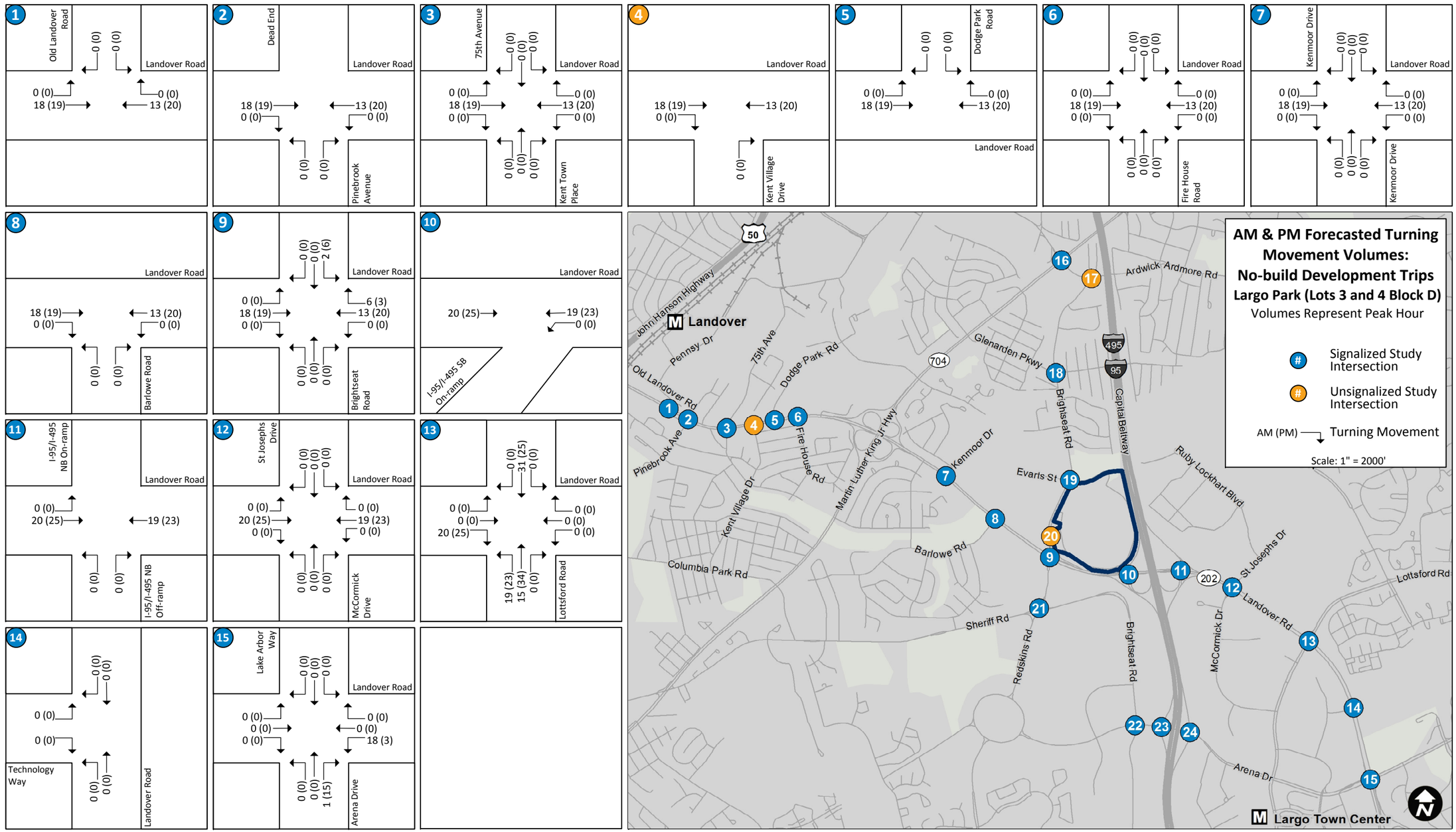
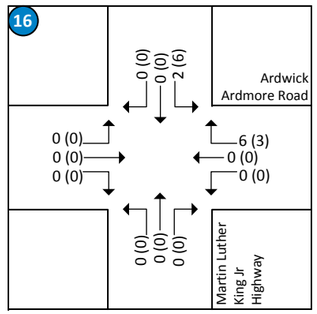
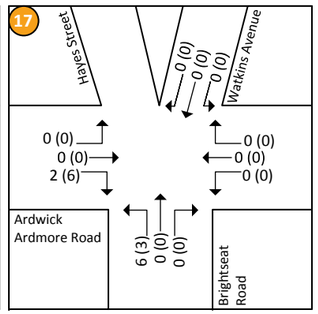
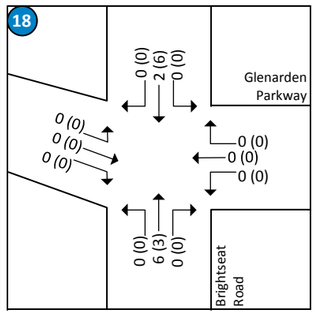
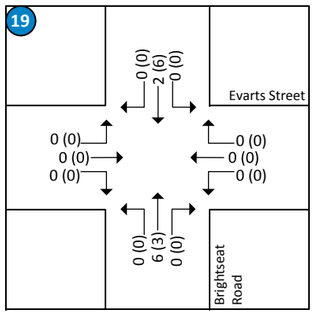


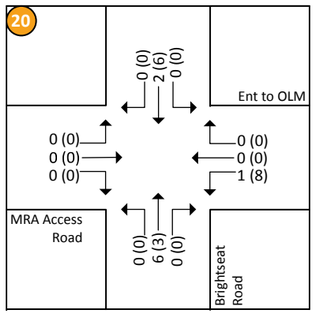

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
18 (19)
0 (0)
13 (20)
2
Dead End
Landover Road
18 (19)
0 (0)
13 (20)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
18 (19)
0 (0)
13 (20)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
18 (19)
0 (0)
13 (20)
0 (0)
Barlowe Road
9
Landover Road
0 (0)
0 (0)
2 (6)
0 (0)
18 (19)
0 (0)
6 (3)
13 (20)
0 (0)
Brightseat Road
10
Landover Road
20 (25)
19 (23)
0 (0)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
0 (0)
20 (25)
19 (23)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
20 (25)
19 (23)
McCormick Drive
13
Landover Road
0 (0)
0 (0)
20 (25)
31 (25)
0 (0)
19 (23)
15 (34)
Lottsford Road
14
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
18 (3)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
495
95
Capital Beltway
Evarts St
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Largo Park (Lots 3 and 4 Block D)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

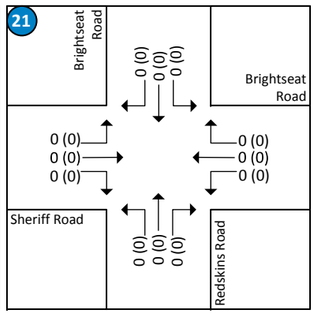


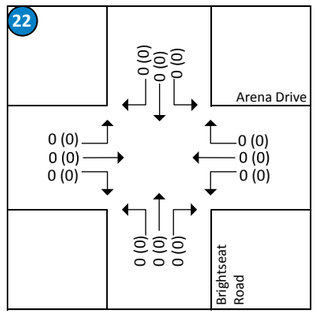


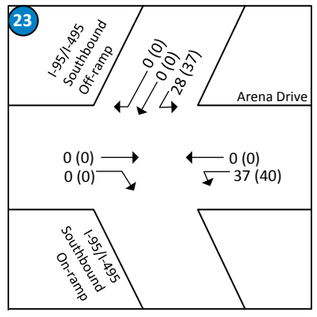


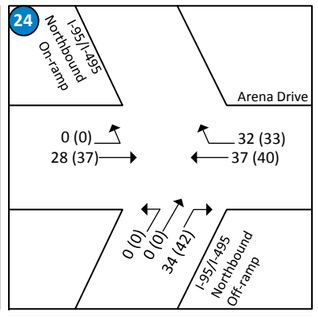












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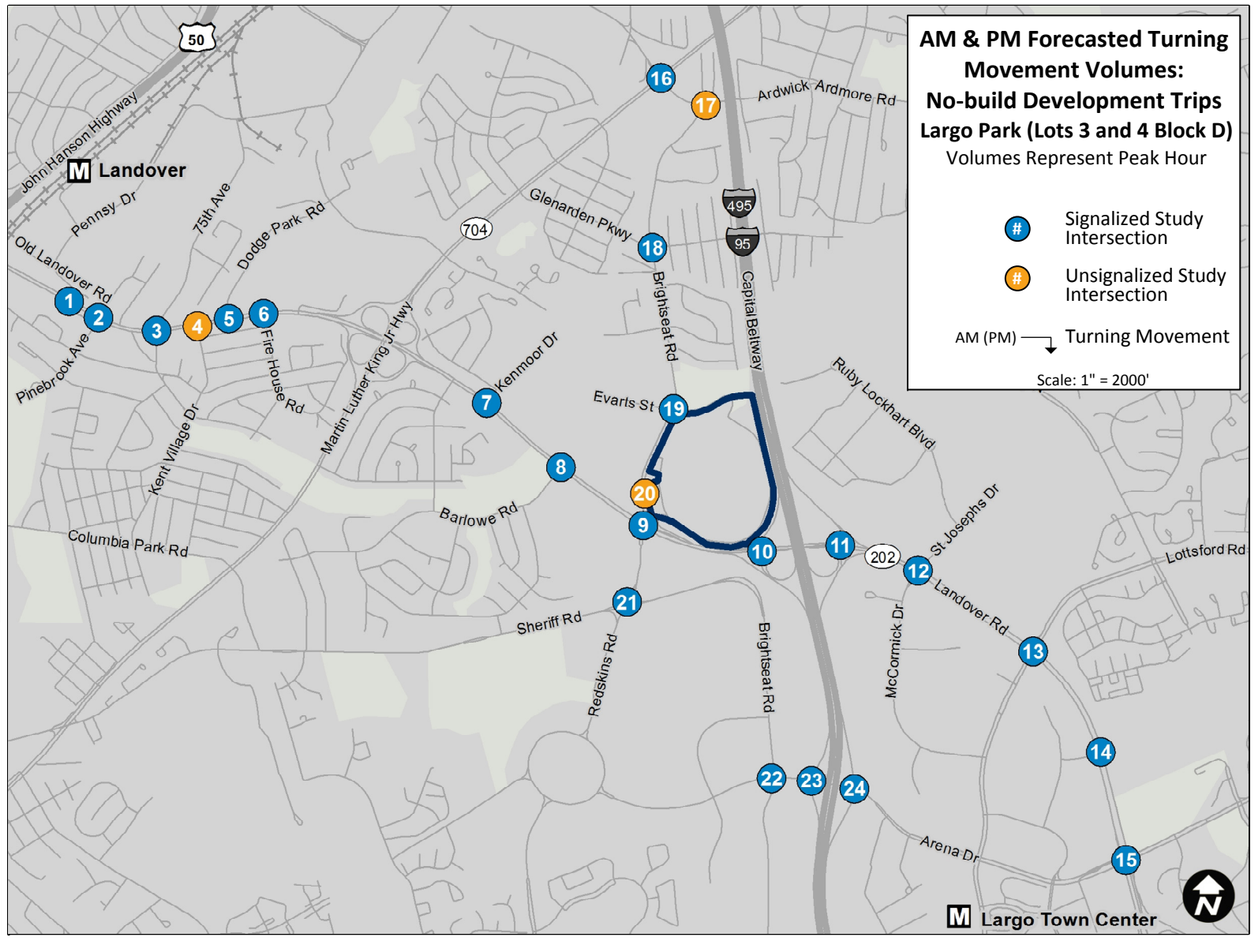
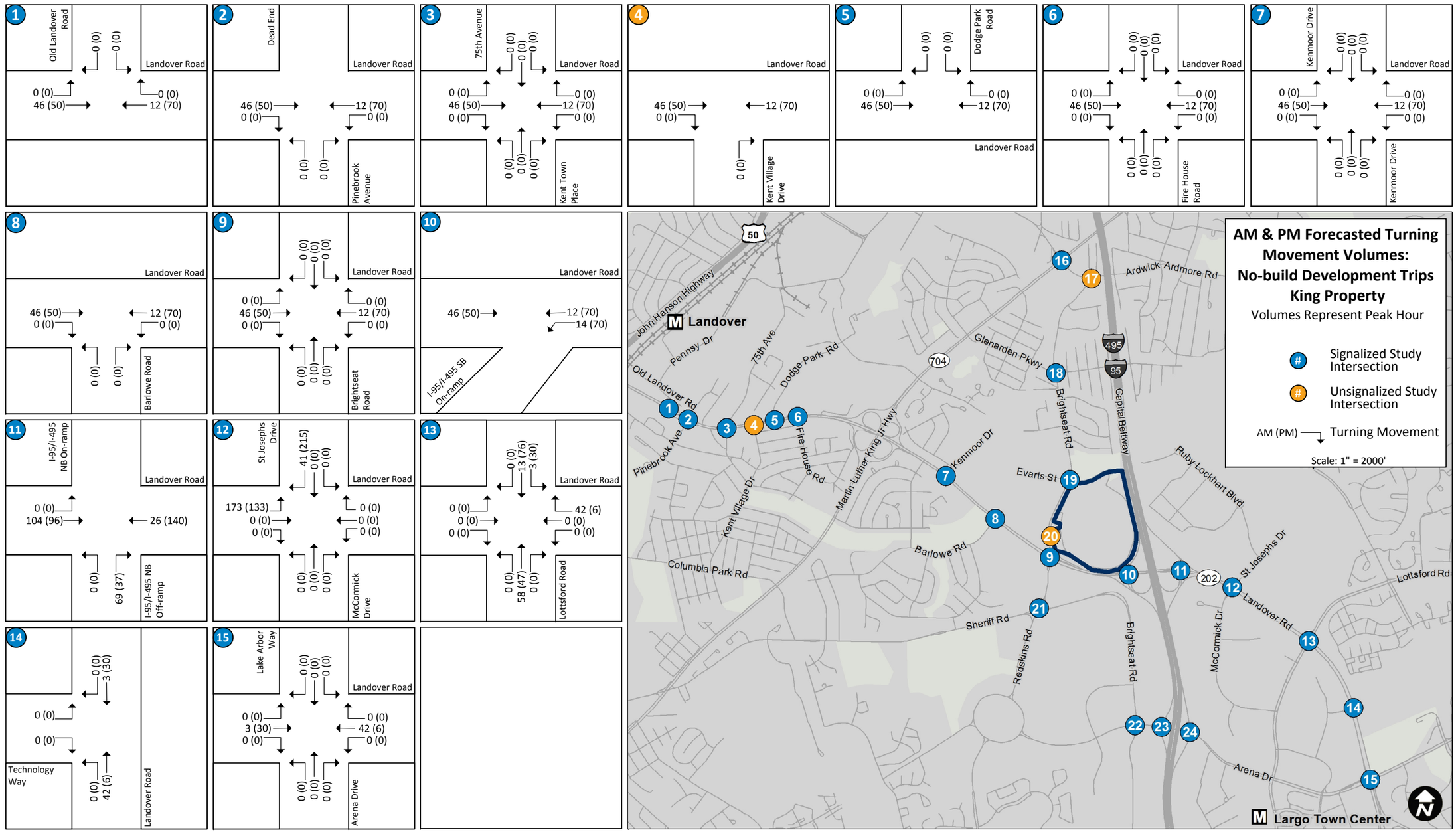
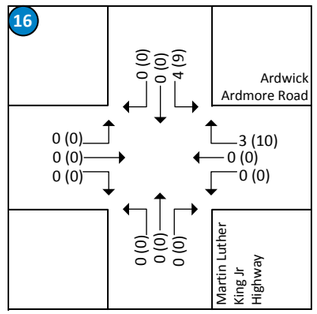
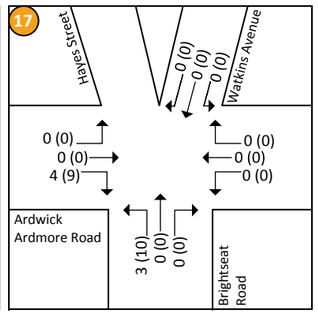
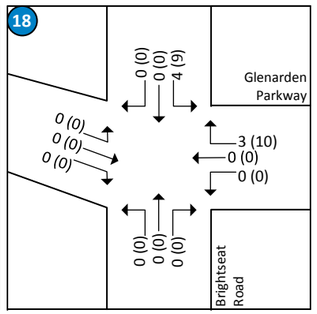
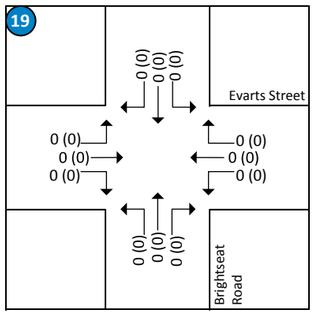


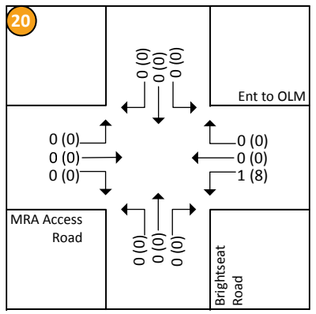

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
46 (50)
12 (70)
0 (0)
2
Dead End
Landover Road
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
0 (0)
Kent Town Place
4
Landover Road
46 (50)
0 (0)
12 (70)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
0 (0)
0 (0)
0 (0)
46 (50)
12 (70)
6
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
0 (0)
Fire House Road
7
Kenmoor Drive
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
0 (0)
Kenmoor Drive
8
Landover Road
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
Barlowe Road
9
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
46 (50)
0 (0)
12 (70)
0 (0)
0 (0)
0 (0)
0 (0)
Brightseat Road
10
Landover Road
46 (50)
12 (70)
14 (70)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
0 (0)
104 (96)
26 (140)
0 (0)
69 (37)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
41 (215)
0 (0)
0 (0)
Landover Road
173 (133)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
McCormick Drive
13
Landover Road
0 (0)
13 (76)
3 (30)
0 (0)
0 (0)
42 (6)
0 (0)
0 (0)
0 (0)
58 (47)
0 (0)
Lottsford Road
14
0 (0)
3 (30)
0 (0)
0 (0)
0 (0)
42 (6)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
3 (30)
0 (0)
0 (0)
42 (6)
0 (0)
0 (0)
0 (0)
0 (0)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
495
95
Capital Beltway
Evarts St
Ruby Lockhart Blvd
St Josephs Dr
202
Landover Rd
Lottsford Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
King Property
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

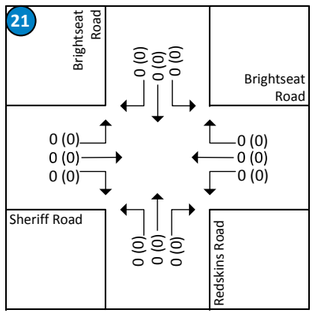


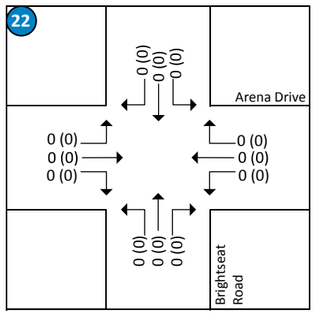


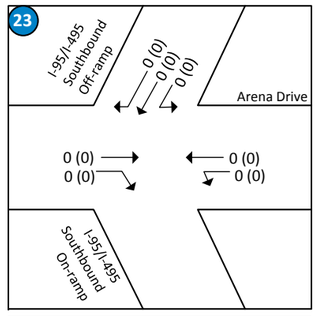


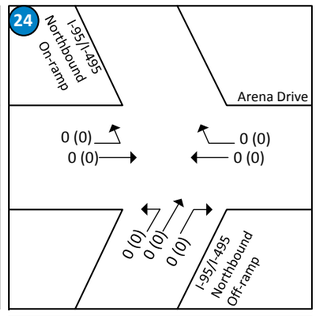












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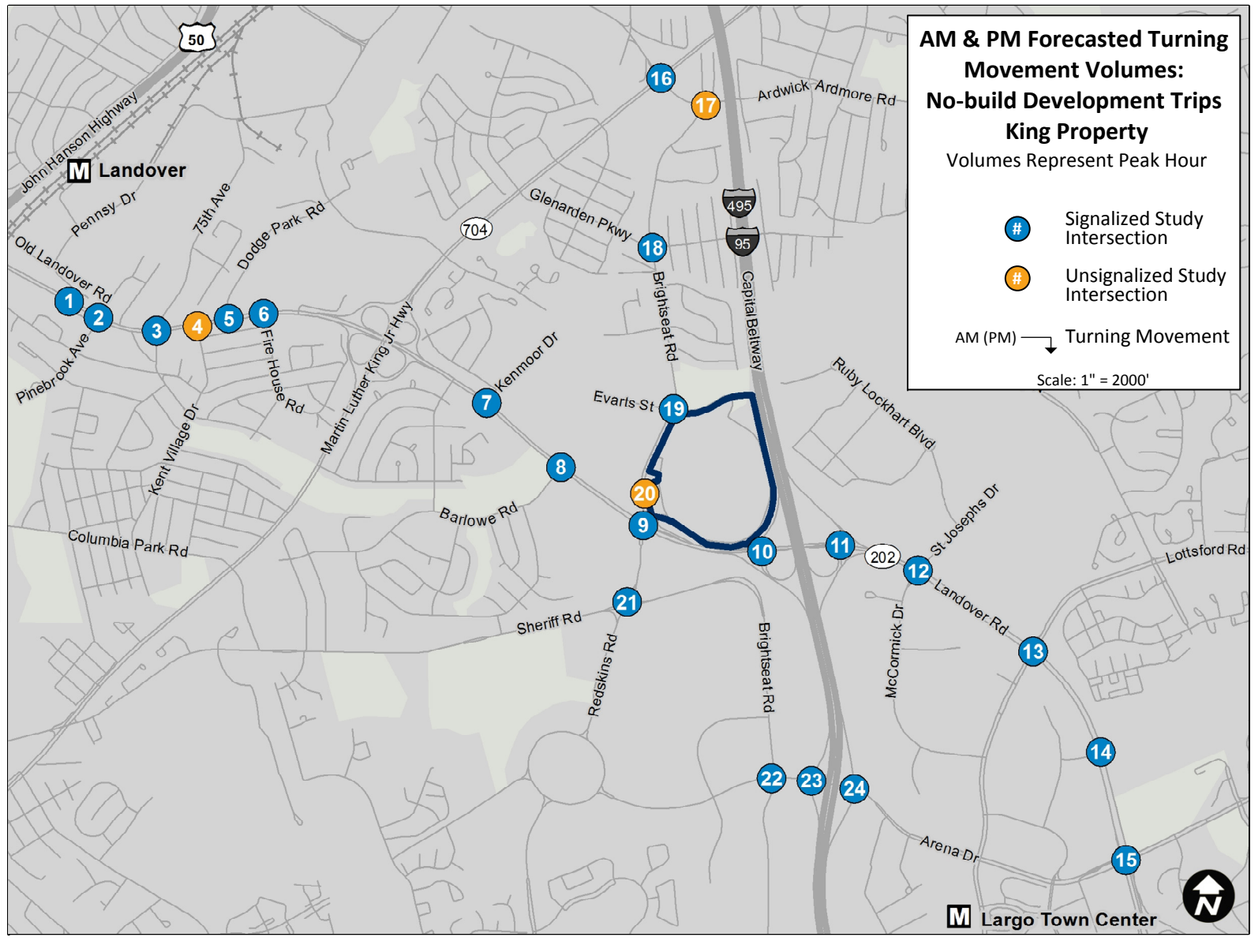

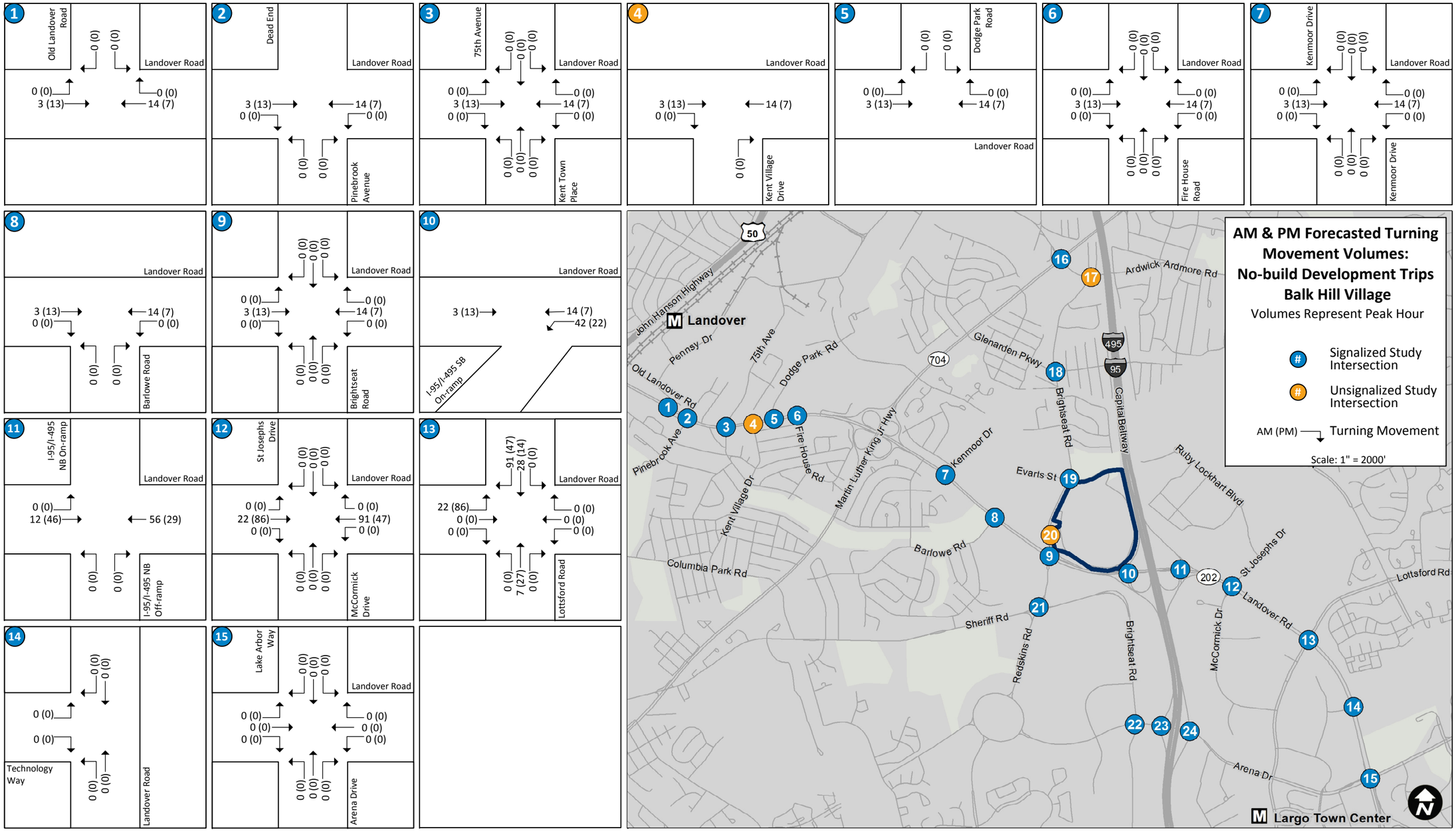
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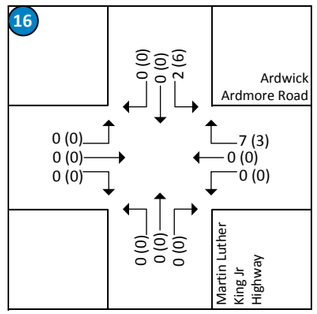
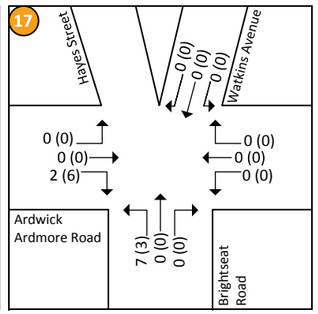
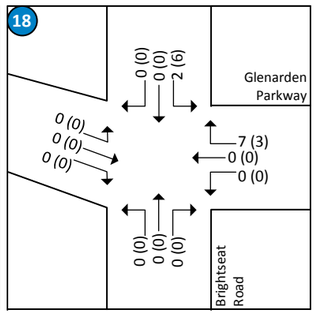
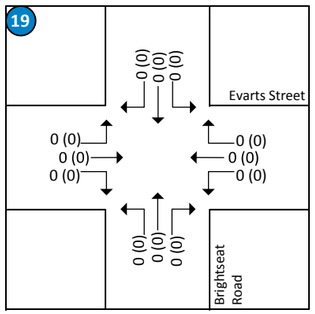
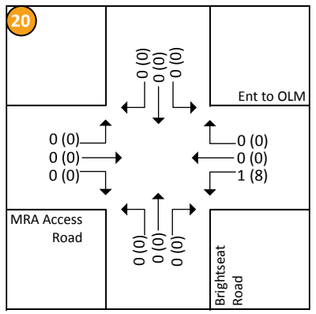
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
3 (13)
14 (7)
2
Dead End
Landover Road
3 (13)
0 (0)
14 (7)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
3 (13)
0 (0)
14 (7)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
3 (13)
14 (7)
42 (22)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
0 (0)
12 (46)
56 (29)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
22 (86)
91 (47)
McCormick Drive
13
Landover Road
22 (86)
91 (47)
28 (14)
Lottsford Road
7 (27)
14
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
Evarts St
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Capital Beltway
495
95
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Balk Hill Village
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

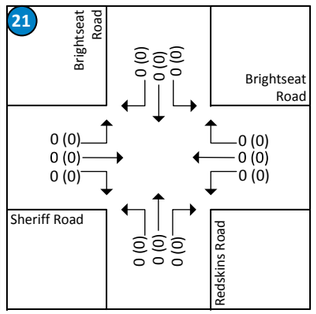


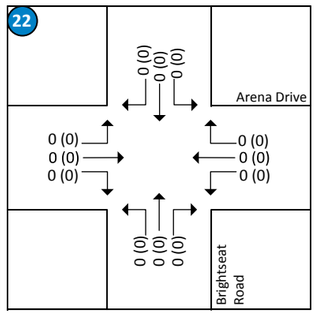


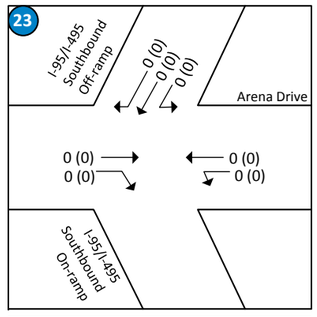


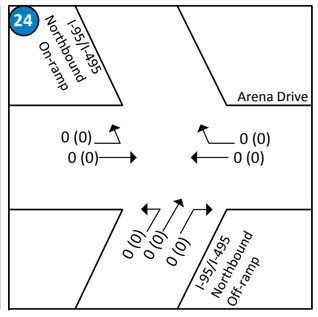












FUTURE
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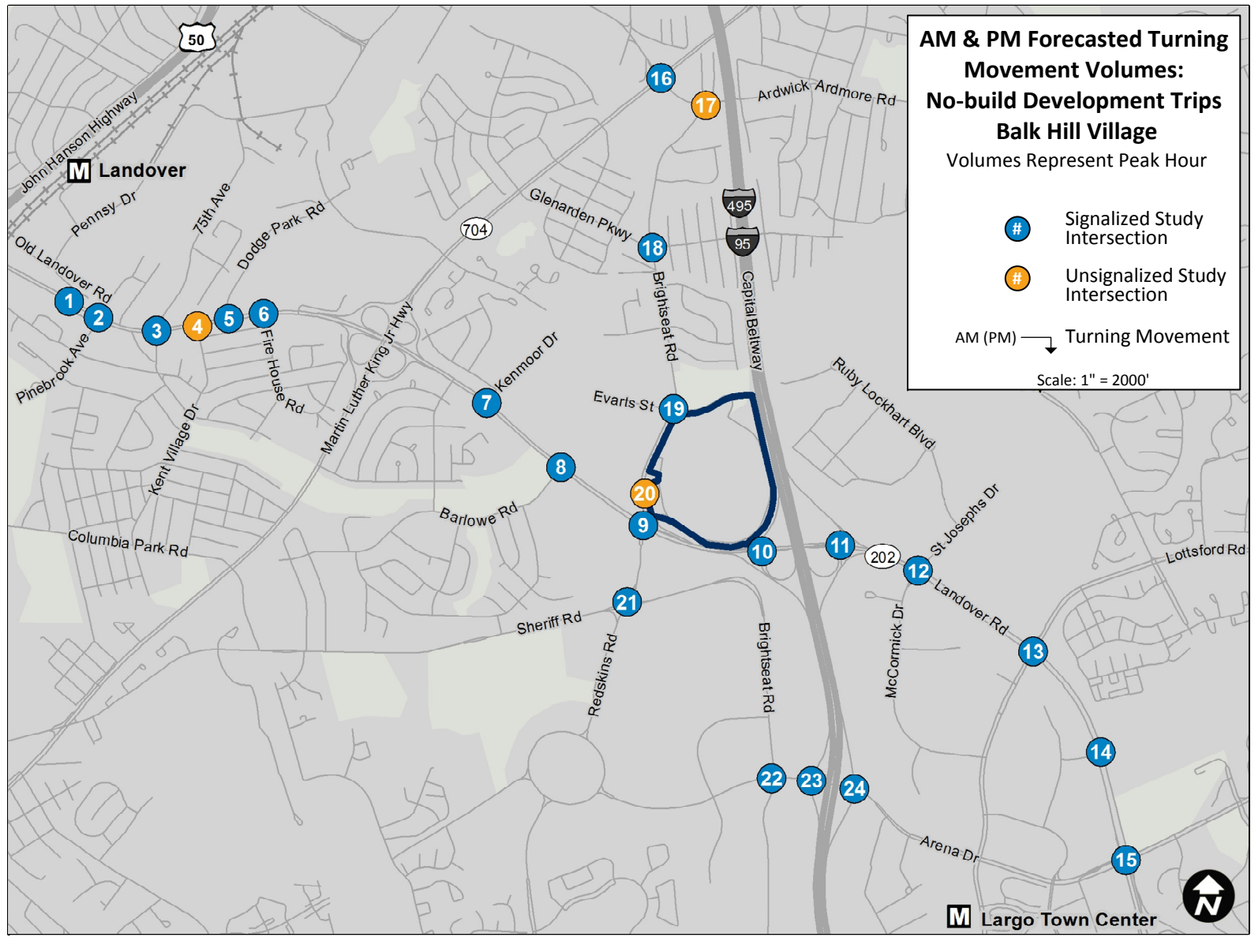
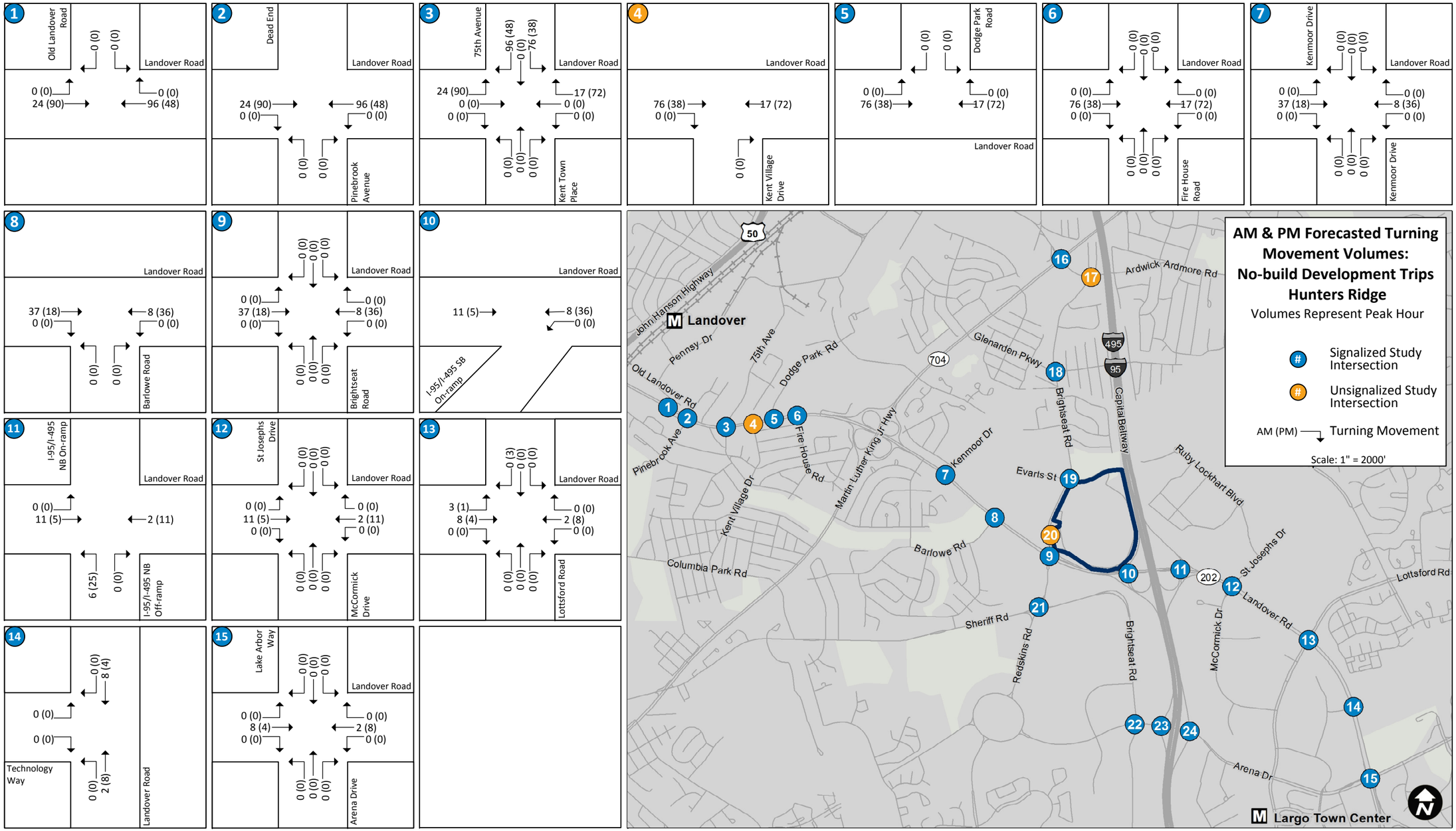
ANALYSIS ONLY

FUTURE
ANALYSIS ONLY

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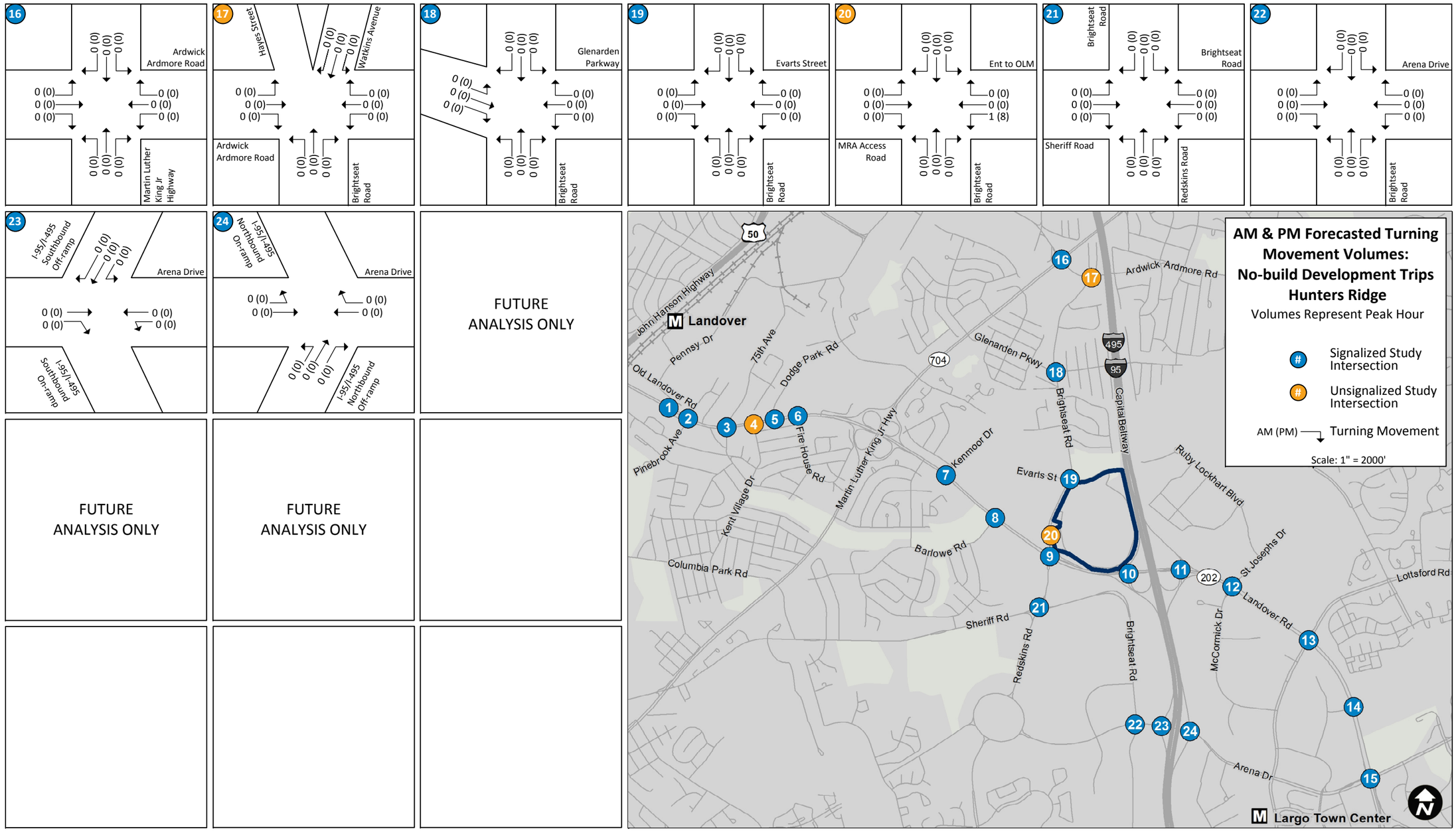
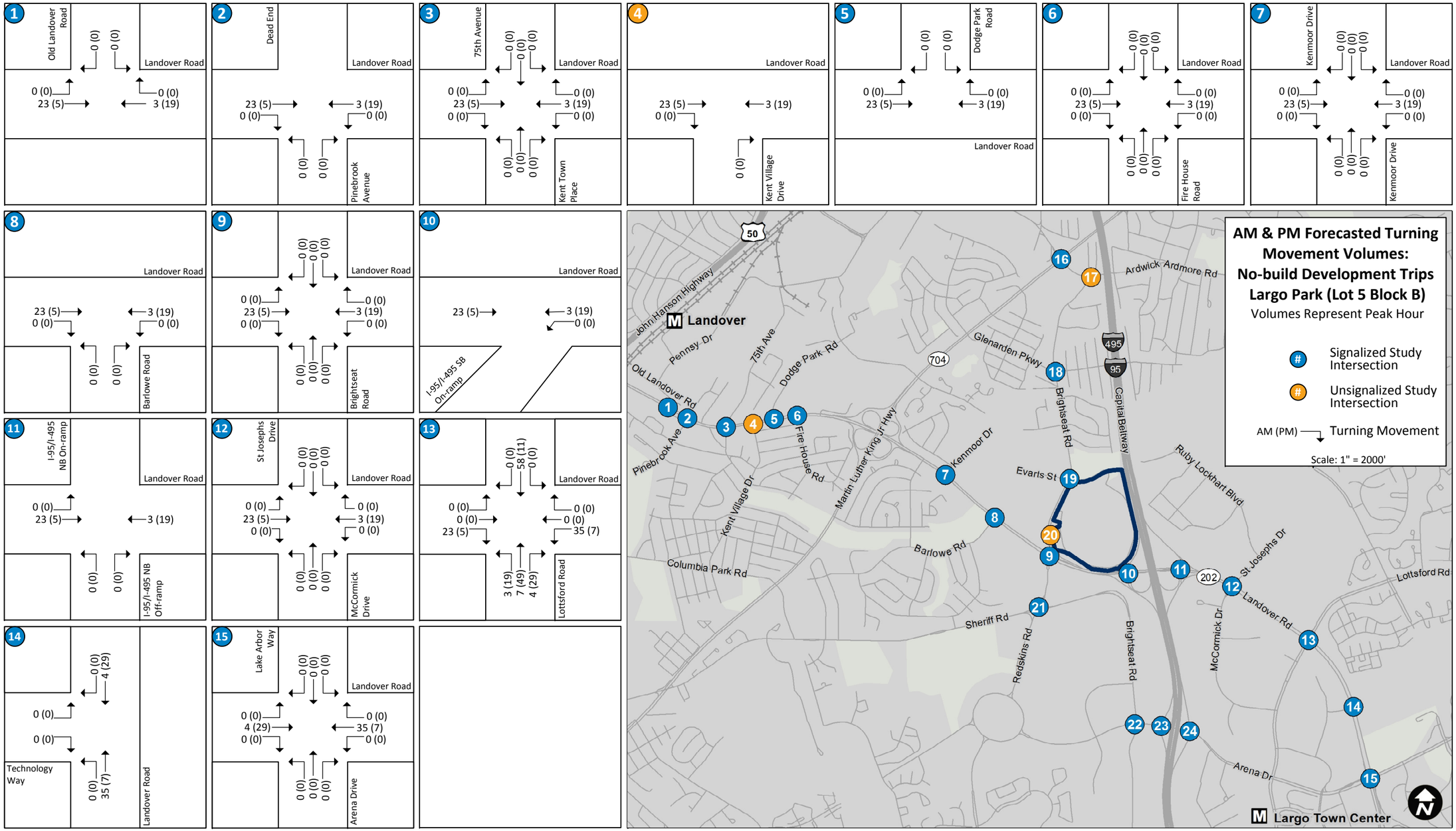
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
24 (90)
0 (0)
96 (48)
2
Dead End
Landover Road
24 (90)
0 (0)
96 (48)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
96 (48)
0 (0)
76 (38)
24 (90)
0 (0)
0 (0)
17 (72)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
Kent Town Place
4
Landover Road
76 (38)
0 (0)
17 (72)
0 (0)
Kent Village Drive
5
Dodge Park Road
0 (0)
0 (0)
0 (0)
76 (38)
0 (0)
17 (72)
Landover Road
6
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
76 (38)
0 (0)
0 (0)
17 (72)
0 (0)
0 (0)
0 (0)
0 (0)
Fire House Road
7
Kenmoor Drive
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
37 (18)
0 (0)
0 (0)
8 (36)
0 (0)
0 (0)
0 (0)
0 (0)
Kenmoor Drive
8
Landover Road
37 (18)
0 (0)
8 (36)
0 (0)
0 (0)
0 (0)
Barlowe Road
9
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
37 (18)
0 (0)
0 (0)
8 (36)
0 (0)
0 (0)
0 (0)
0 (0)
Brightseat Road
10
Landover Road
11 (5)
8 (36)
0 (0)
I-95/I-495 SB
On-ramp
11
I-95/I-495
NB On-ramp
Landover Road
0 (0)
11 (5)
2 (11)
6 (25)
0 (0)
I-95/I-495 NB
Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
11 (5)
0 (0)
0 (0)
2 (11)
0 (0)
0 (0)
0 (0)
0 (0)
McCormick Drive
13
Landover Road
0 (3)
0 (0)
0 (0)
3 (1)
8 (4)
0 (0)
0 (0)
2 (8)
0 (0)
0 (0)
0 (0)
0 (0)
Lottsford Road
14
0 (0)
8 (4)
0 (0)
0 (0)
0 (0)
2 (8)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
0 (0)
0 (0)
0 (0)
0 (0)
8 (4)
0 (0)
0 (0)
2 (8)
0 (0)
0 (0)
0 (0)
0 (0)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
Evarts St
Ruby Lockhart Blvd
Capital Beltway
495
95
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Hunters Ridge
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'


16
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
Ardwick Ardmore Road
Martin Luther King Jr Highway
17
Hayes Street
Watkins Avenue
Ardwick Ardmore Road
Brightseat Road
18
Glenarden Parkway
Brightseat Road
19
Evarts Street
Brightseat Road
20
Ent to OLM
MRA Access Road
Brightseat Road
21
Brightseat Road
Brightseat Road
Sheriff Road
Redskins Road
22
Arena Drive
Brightseat Road
23
I-95/I-495 Southbound Off-ramp
Arena Drive
I-95/I-495 Southbound On-ramp
24
I-95/I-495 Northbound On-ramp
Arena Drive
I-95/I-495 Northbound Off-ramp
FUTURE ANALYSIS ONLY
FUTURE ANALYSIS ONLY
FUTURE ANALYSIS ONLY
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Barlowe Rd
Columbia Park Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Ardwick Ardmore Rd
Glenarden Pkwy
704
Evarts St
Ruby Lockhart Blvd
McCormick Dr
St Josephs Dr
202
Landover Rd
Lottsford Rd
Arena Dr
Largo Town Center
495
95
Capital Beltway
AM & PM Forecasted Turning Movement Volumes: No-build Development Trips Hunters Ridge
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM) Turning Movement
Scale: 1" = 2000'


1
Old Landover Road
Landover Road
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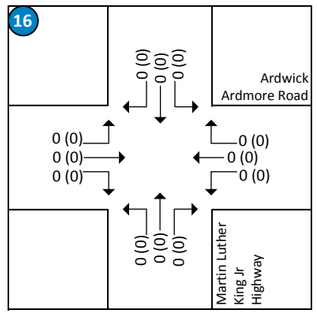
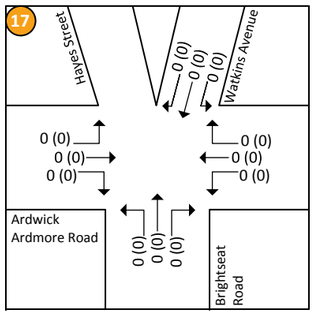
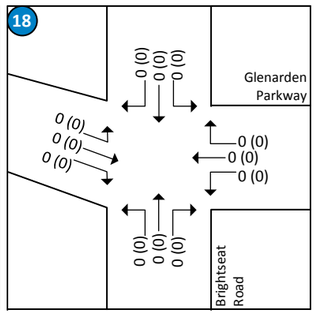
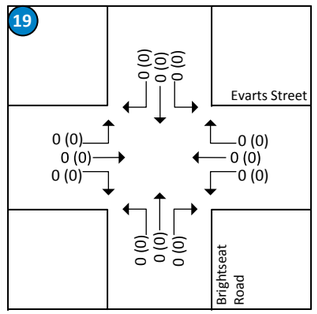
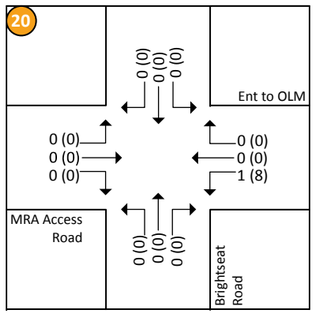
0 (0)
0 (0)
23 (5)
0 (0)
3 (19)
2
Dead End
Landover Road
23 (5)
0 (0)
3 (19)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
23 (5)
0 (0)
3 (19)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
23 (5)
0 (0)
3 (19)
0 (0)
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
23 (5)
3 (19)
0 (0)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
McCormick Drive
13
Landover Road
58 (11)
35 (7)
3 (19)
7 (49)
4 (29)
Lottsford Road
14
4 (29)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
4 (29)
35 (7)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
495
95
Capital Beltway
Evarts St
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Largo Park (Lot 5 Block B)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

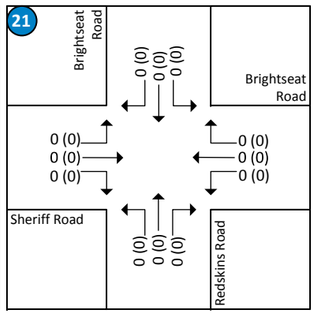


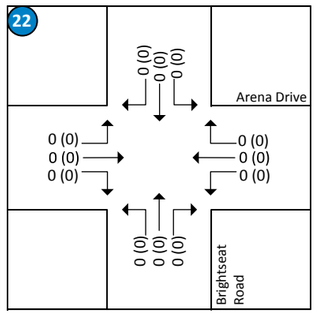


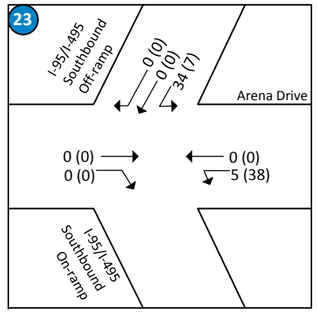


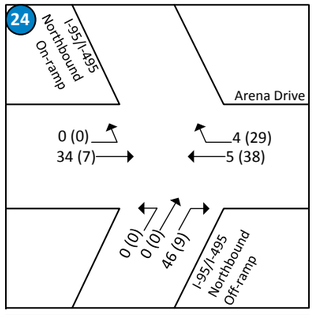












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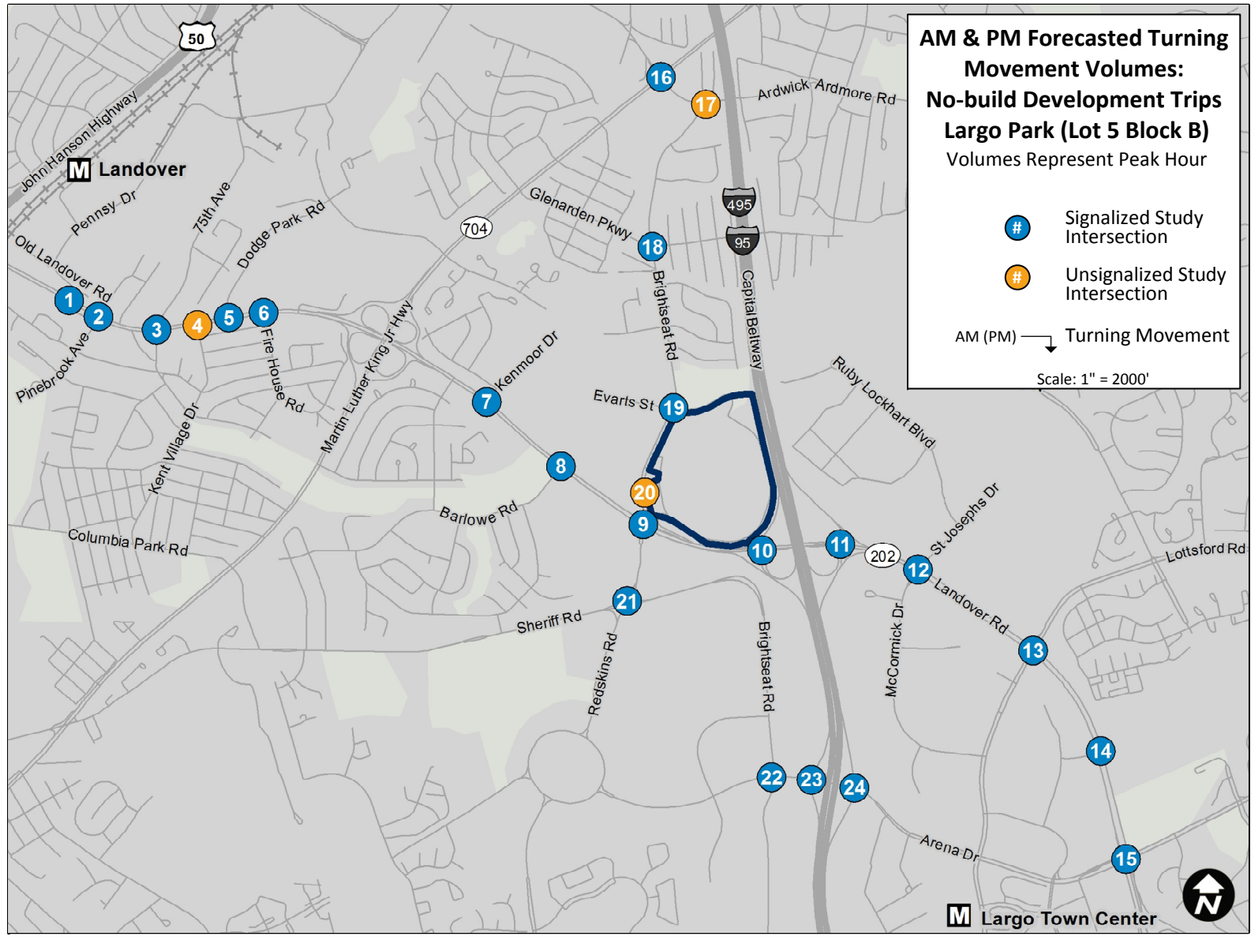
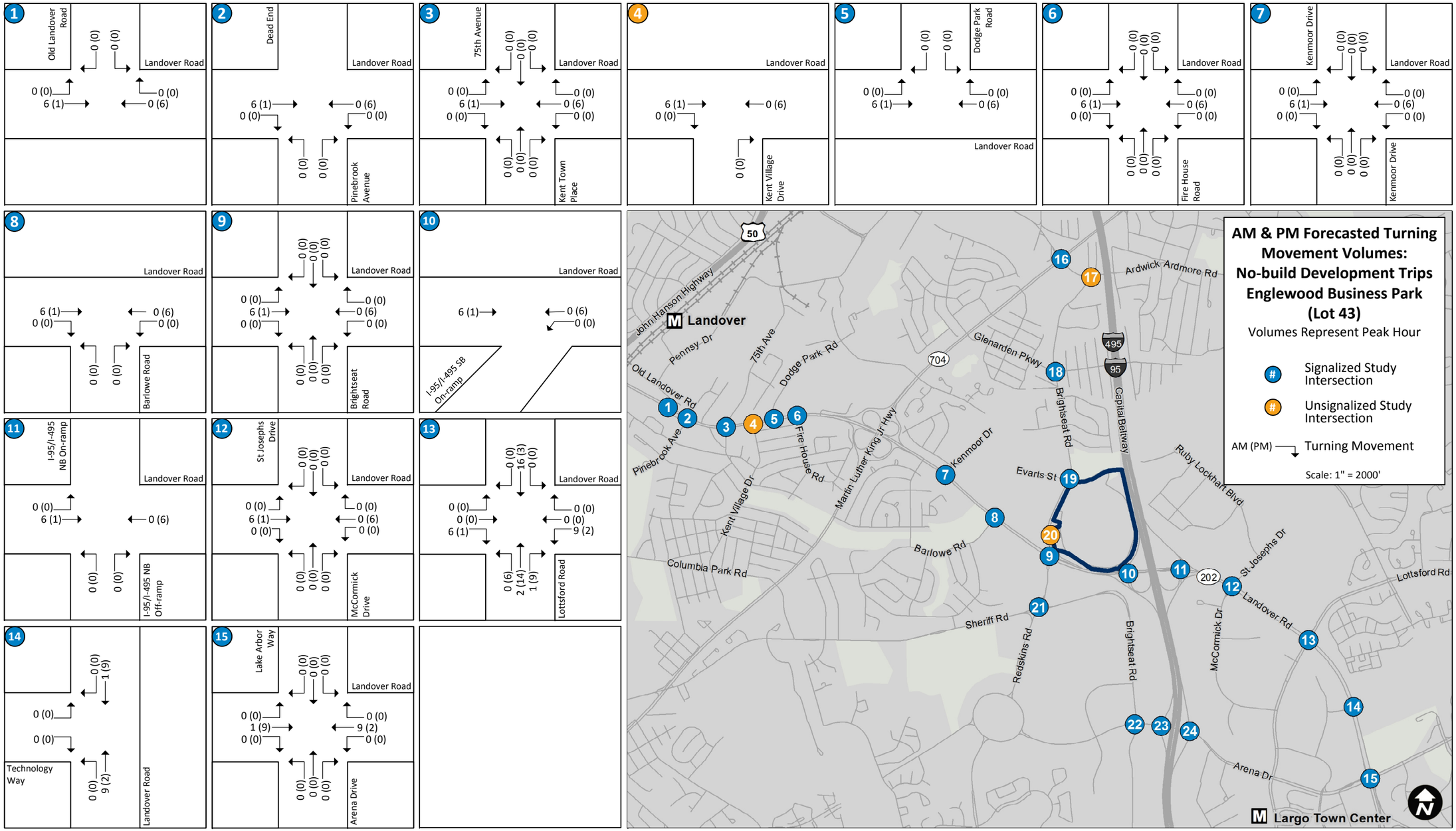
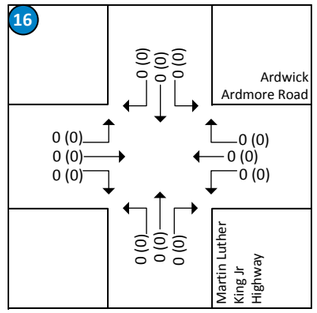
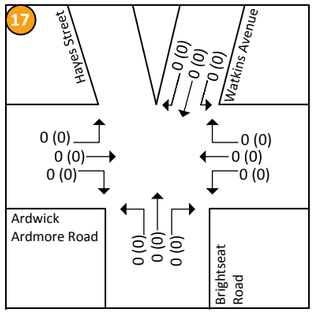
FUTURE
ANALYSIS ONLY

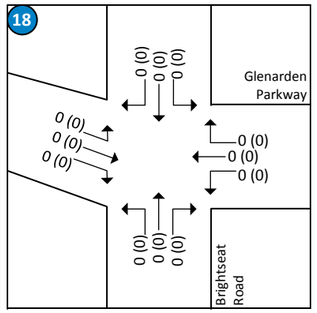
FUTURE
ANALYSIS ONLY

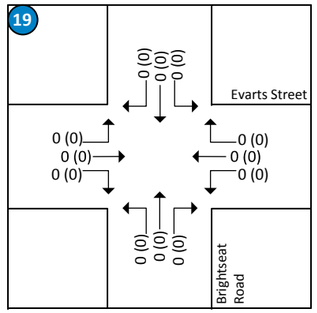


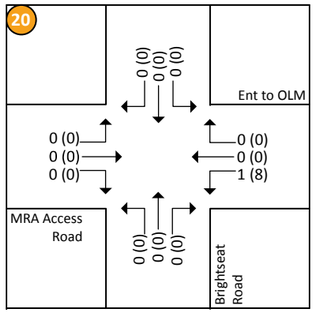

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
6 (1)
0 (6)
2
Dead End
Landover Road
6 (1)
0 (0)
0 (6)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
6 (1)
0 (0)
0 (6)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
McCormick Drive
13
Landover Road
16 (3)
9 (2)
Lottsford Road
14
Technology Way
1 (9)
9 (2)
Landover Road
15
Lake Arbor Way
Landover Road
1 (9)
9 (2)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
Evarts St
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
495
95
Capital Beltway
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Englewood Business Park
(Lot 43)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM) Turning Movement
Scale: 1" = 2000'

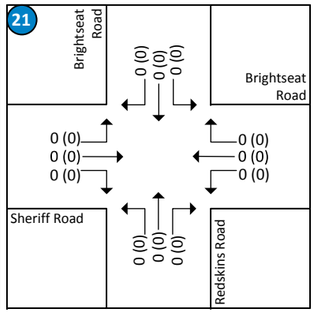


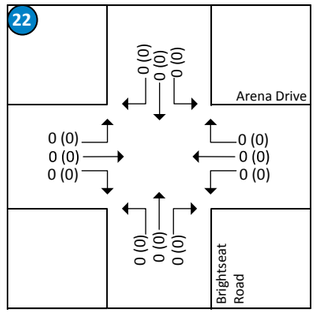


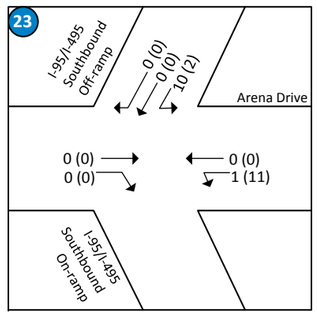


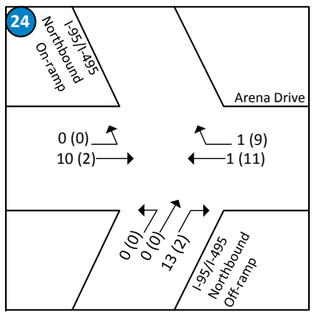












FUTURE
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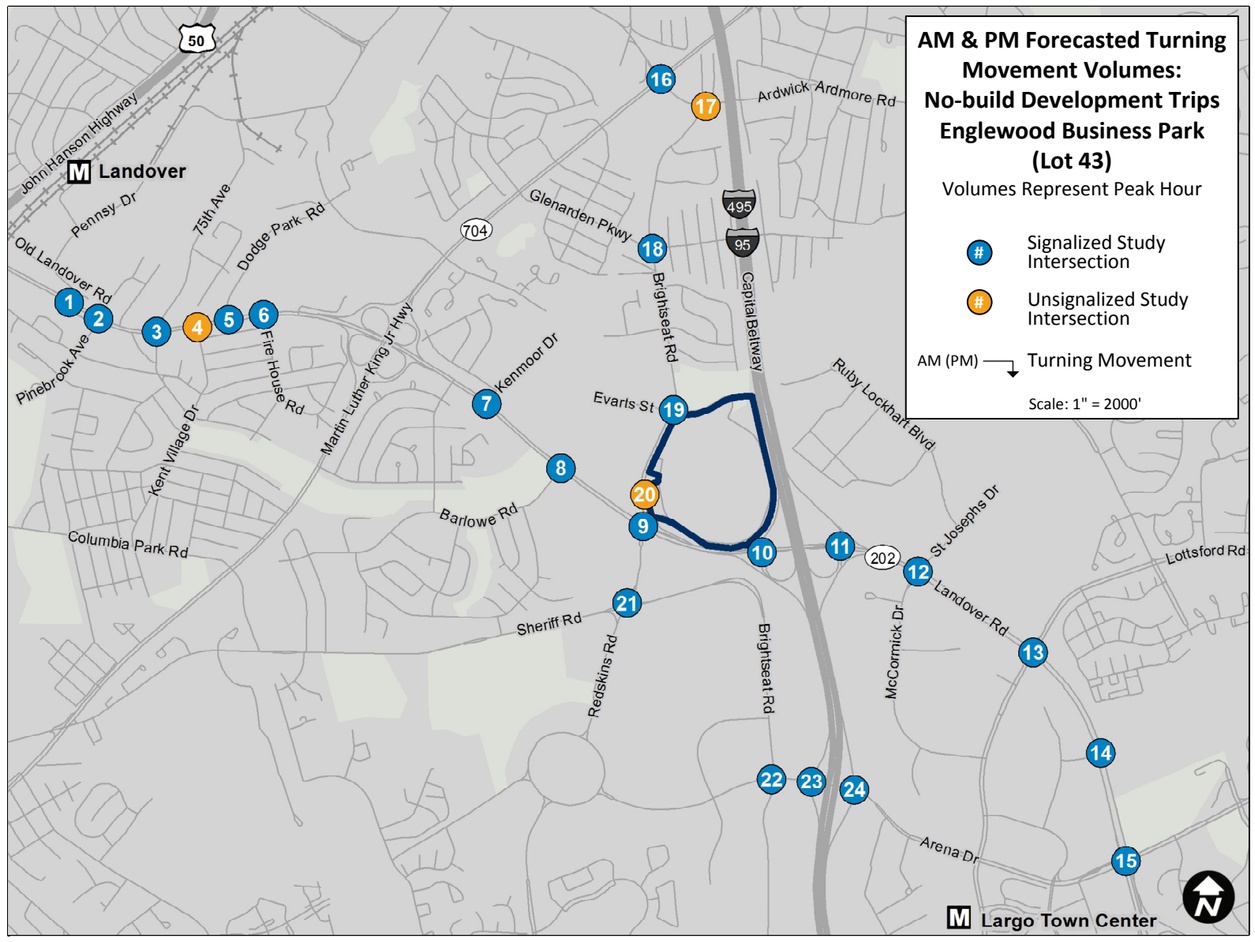
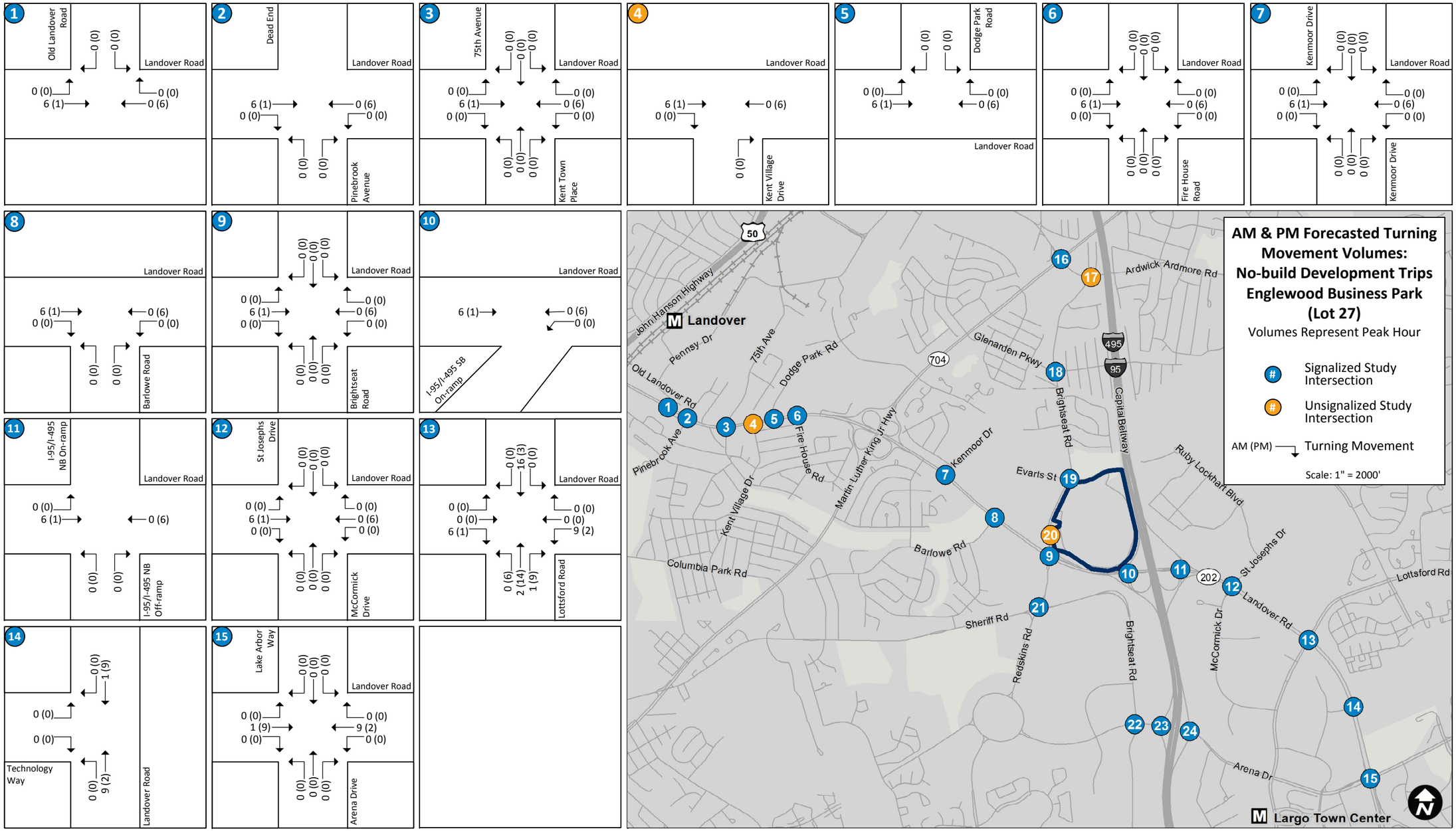
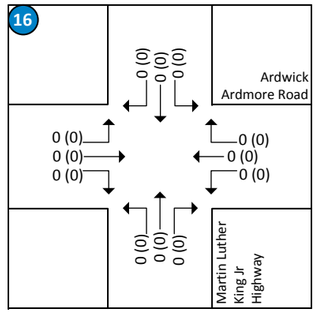
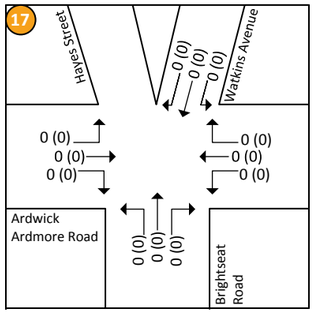
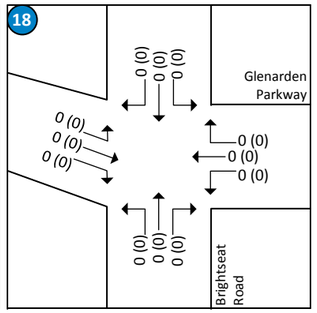
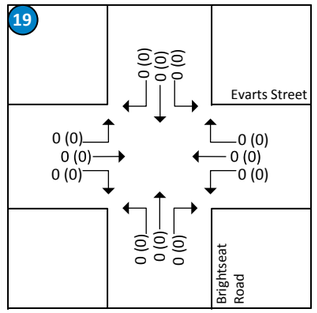


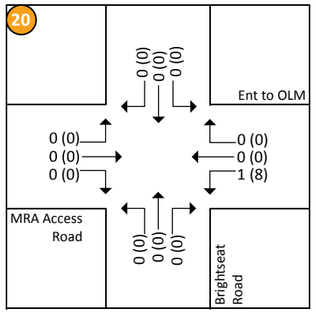

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
6 (1)
0 (6)
2
Dead End
Landover Road
6 (1)
0 (0)
0 (6)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
6 (1)
0 (0)
0 (6)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
McCormick Drive
13
Landover Road
Lottsford Road
14
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
704
Glenarden Pkwy
Ardwick Ardmore Rd
16
17
18
Brightseat Rd
495
95
Capital Beltway
Evarts St
19
20
21
Ruby Lockhart Blvd
St Josephs Dr
202
Landover Rd
Lottsford Rd
McCormick Dr
22
23
24
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Englewood Business Park (Lot 27)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM) Turning Movement
Scale: 1" = 2000'

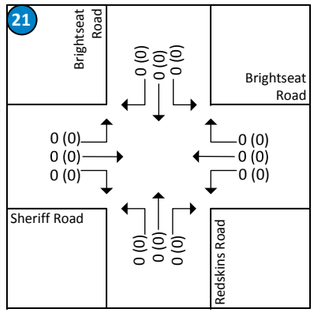


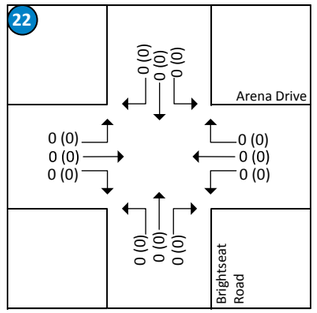


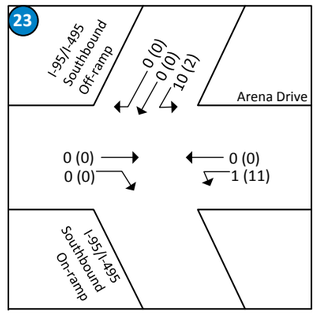


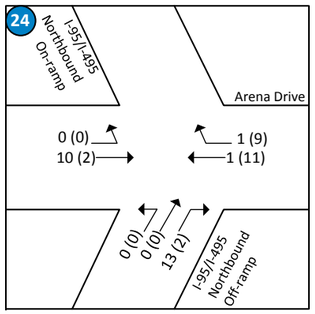












FUTURE
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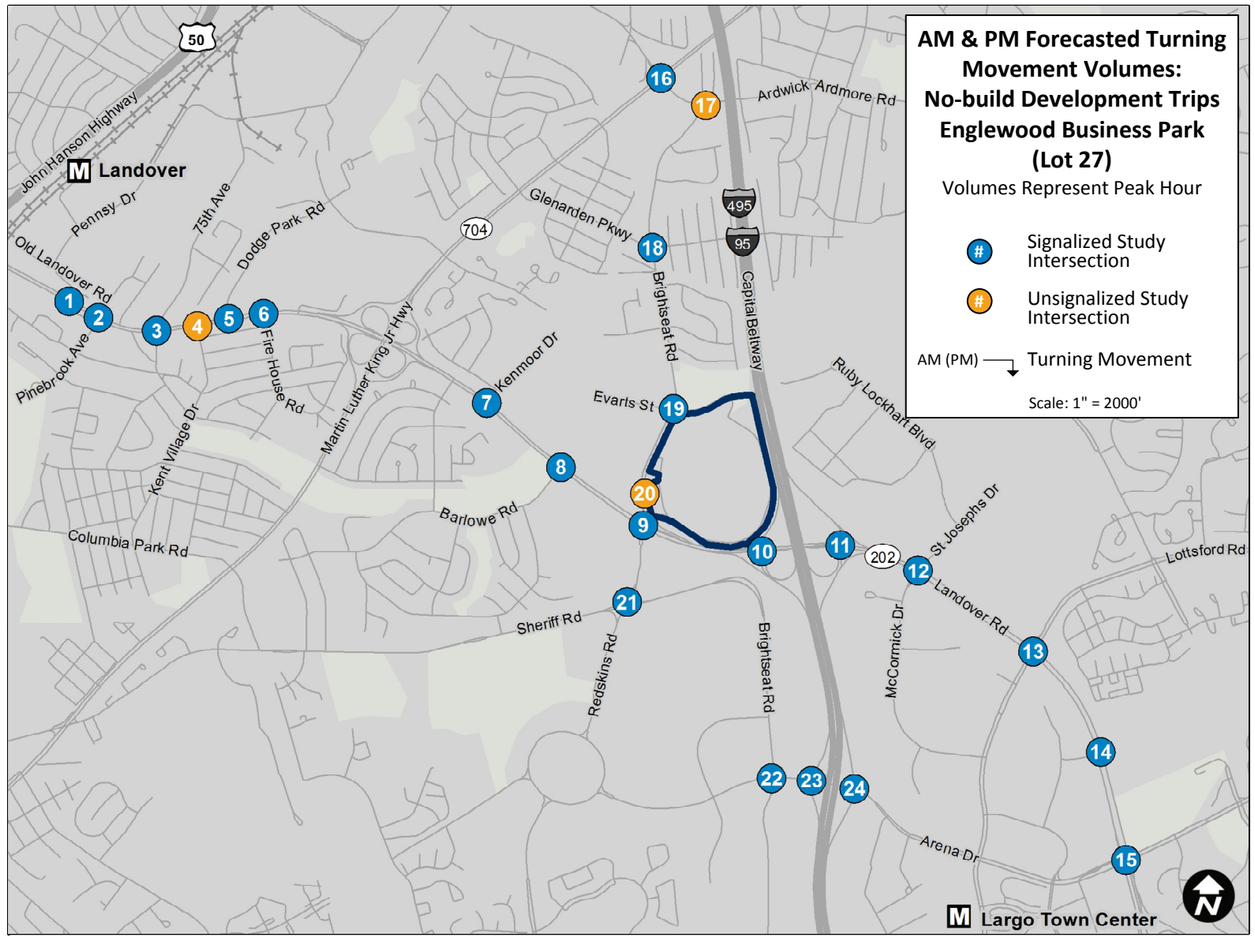
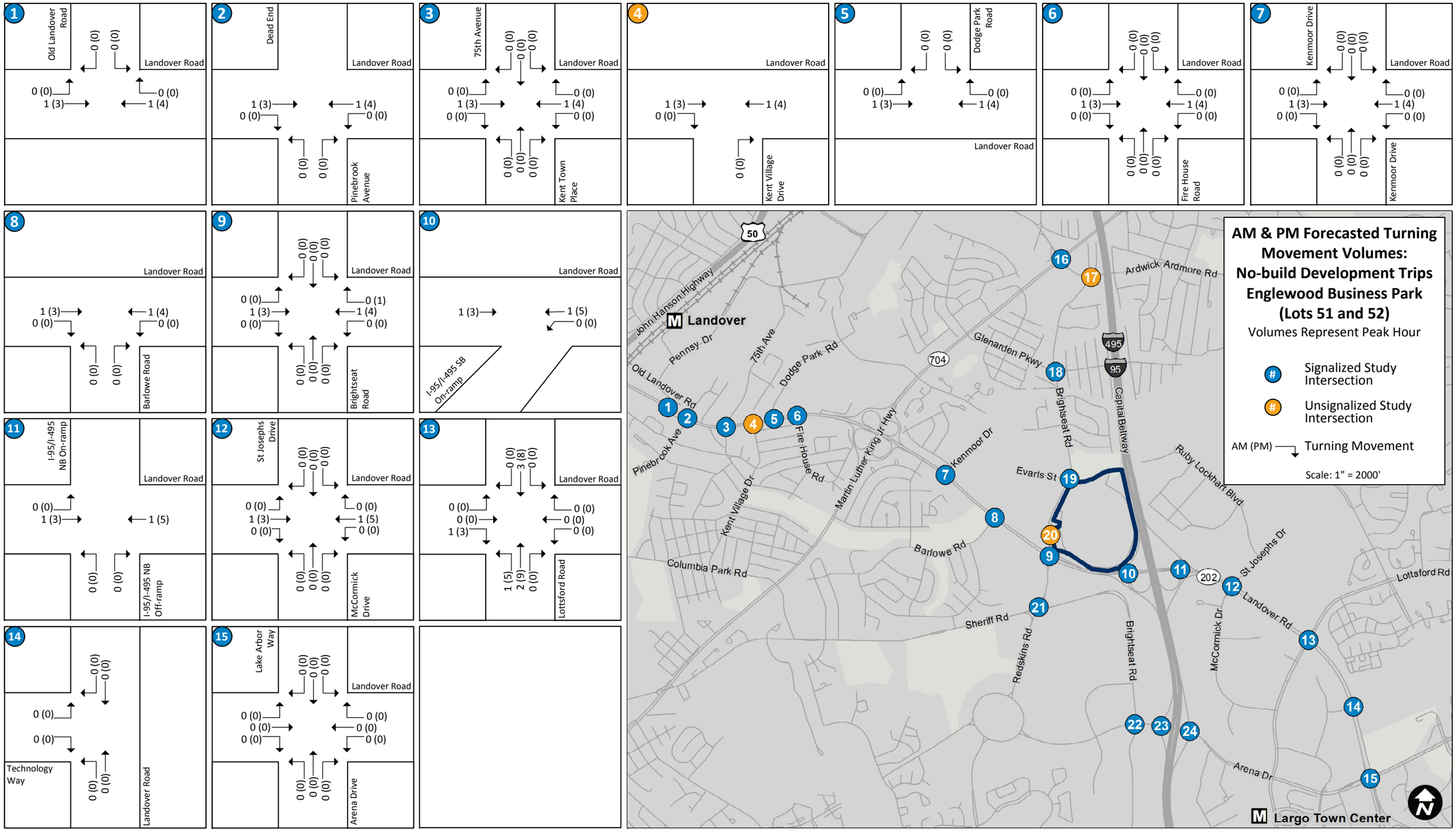
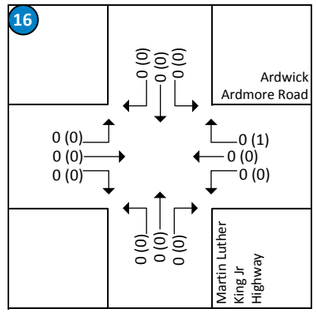
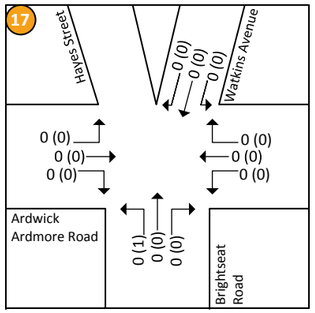
FUTURE
ANALYSIS ONLY

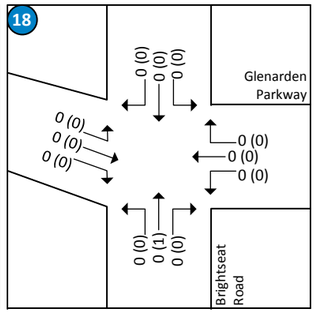
FUTURE
ANALYSIS ONLY

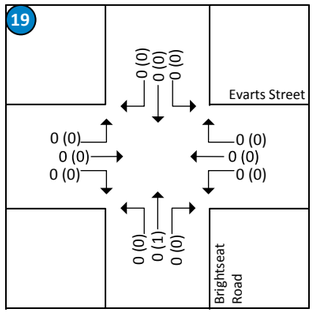


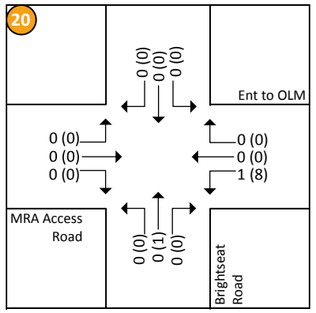

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
1 (3)
1 (4)
2
Dead End
Landover Road
1 (3)
0 (0)
1 (4)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
1 (3)
0 (0)
1 (4)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
0 (1)
Brightseat Road
10
Landover Road
1 (5)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
McCormick Drive
13
Landover Road
3 (8)
1 (5)
2 (9)
Lottsford Road
14
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Evarts St
Glenarden Pkwy
704
Ardwick Ardmore Rd
Ruby Lockhart Blvd
St Josephs Dr
202
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
495
95
Capital Beltway
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Englewood Business Park
(Lots 51 and 52)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM) Turning Movement
Scale: 1" = 2000'

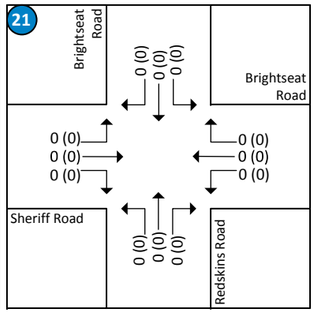


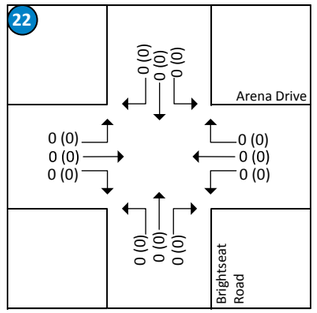


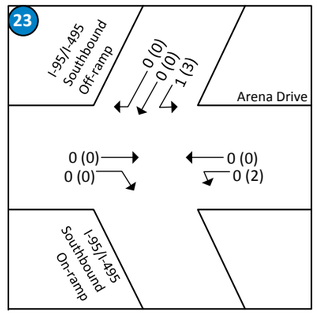


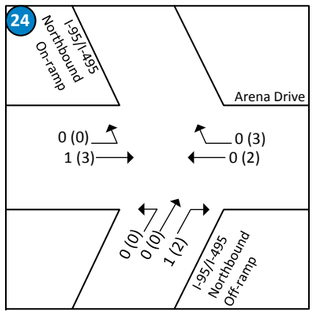












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ANALYSIS ONLY

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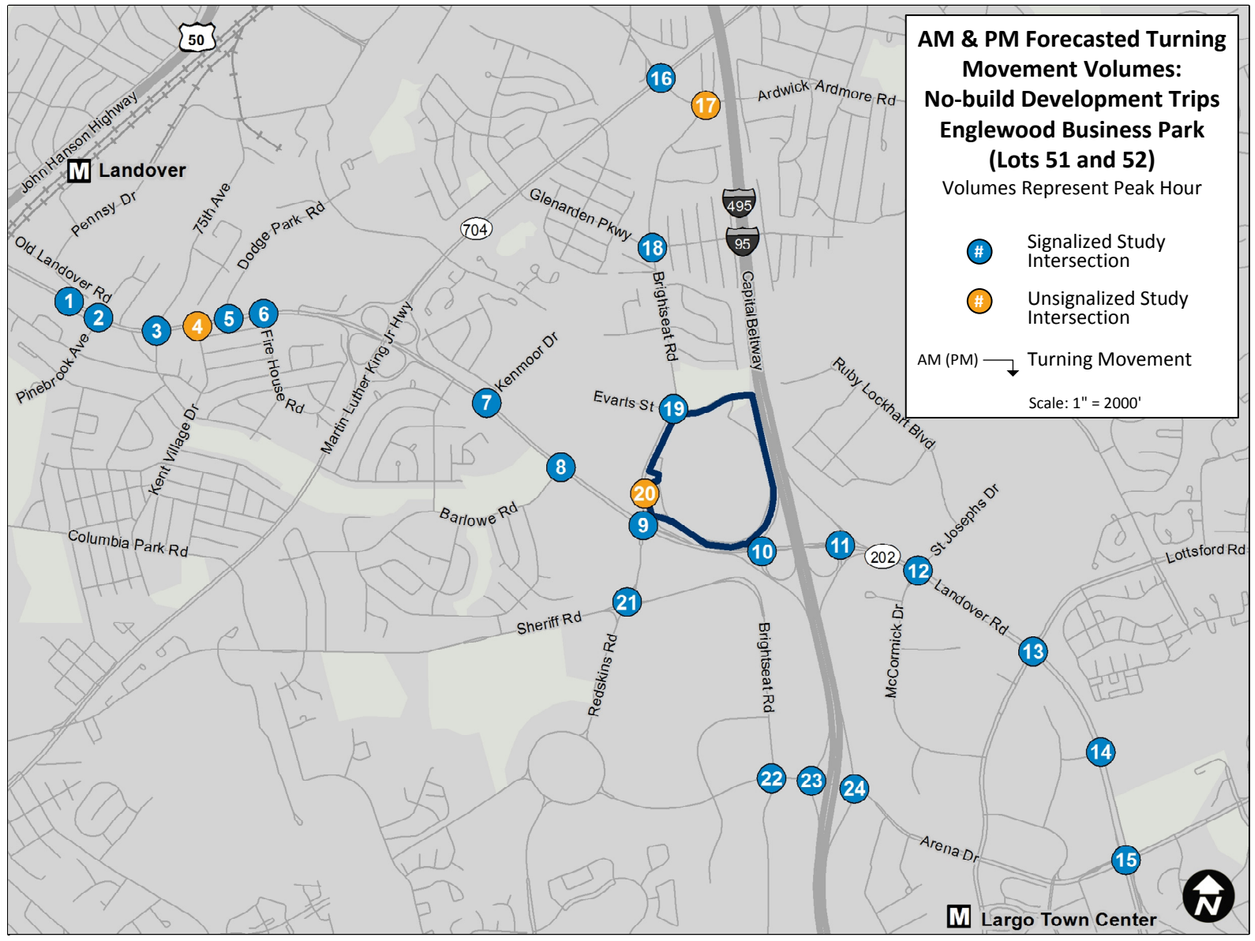


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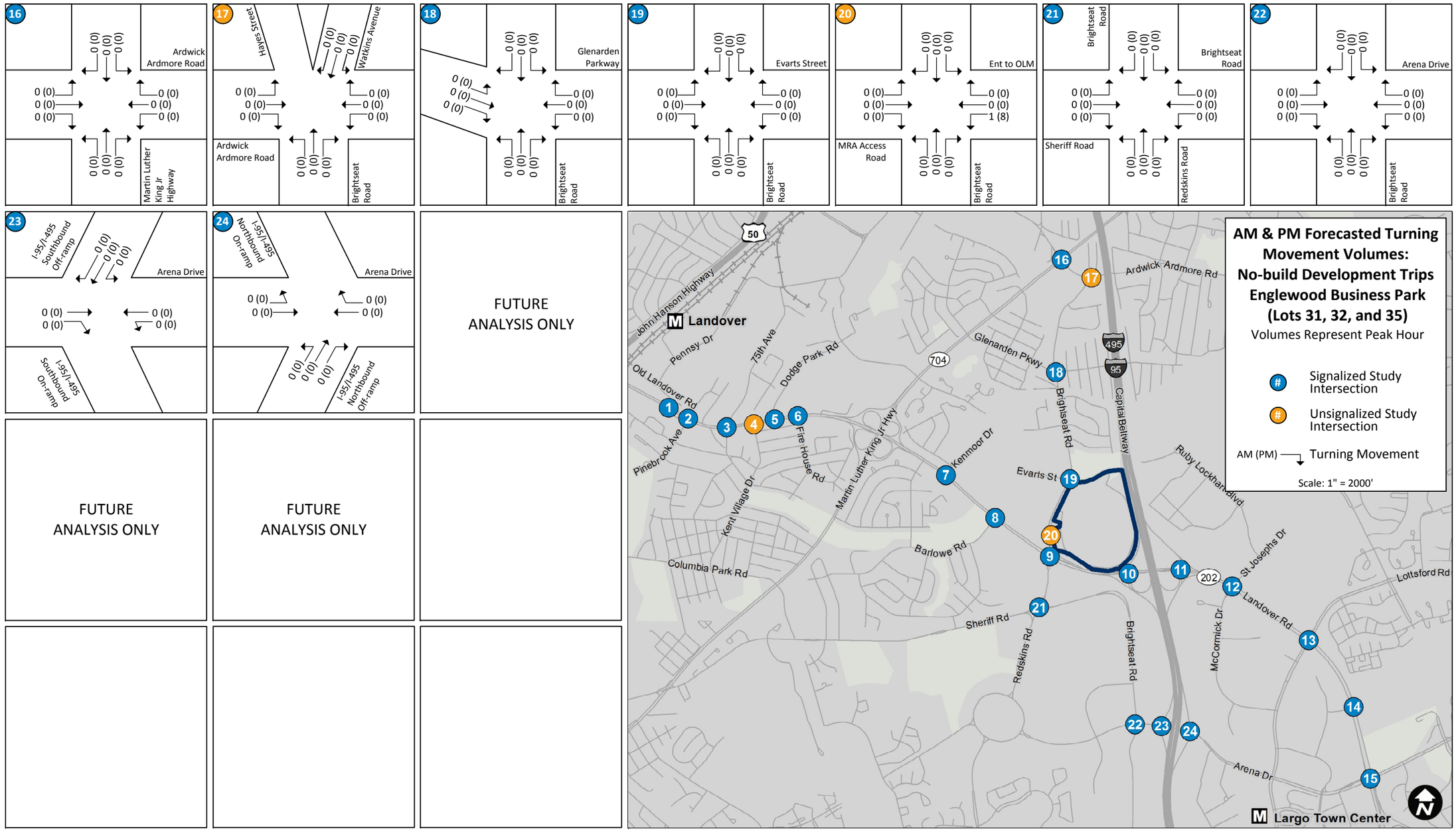
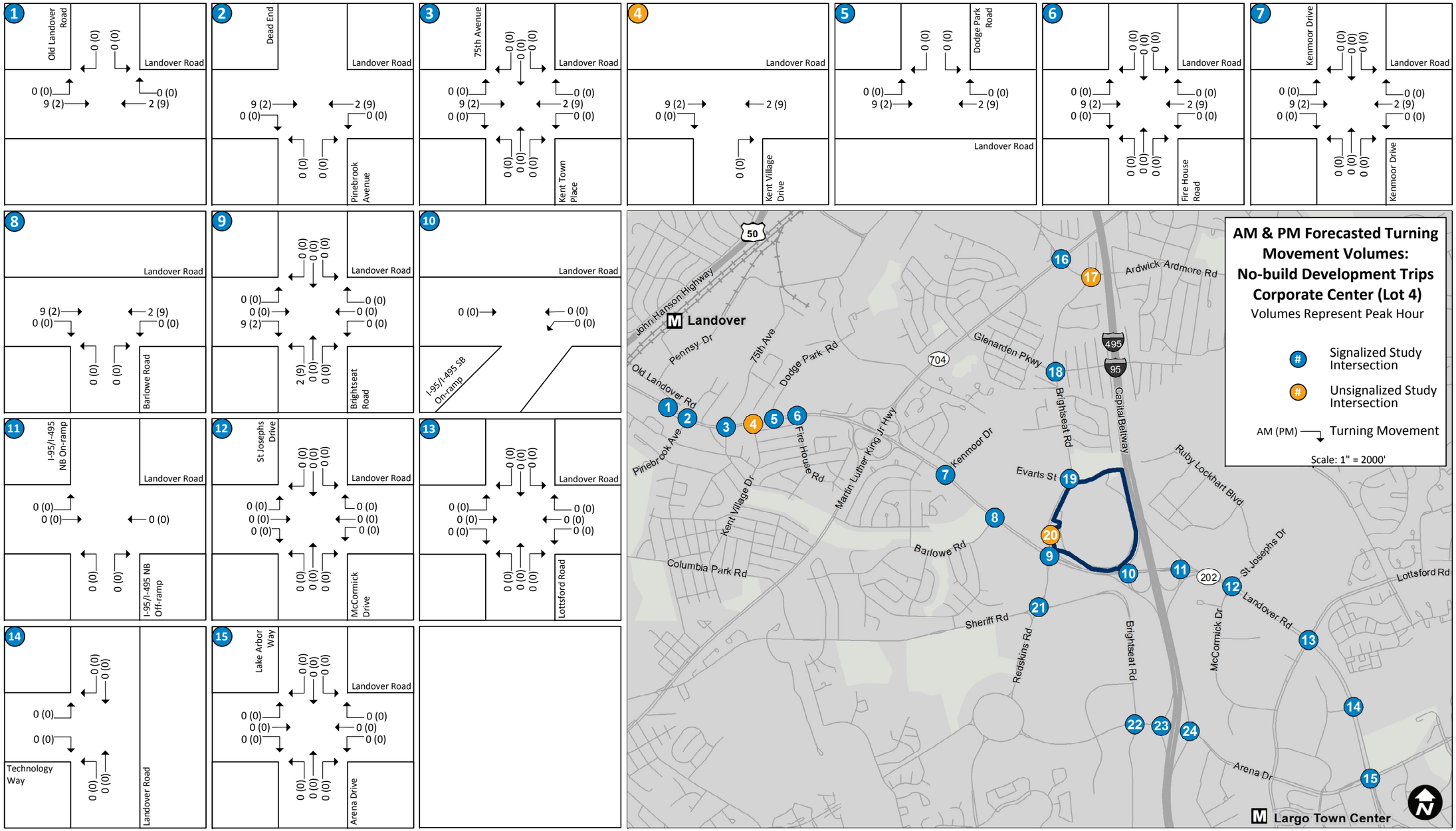
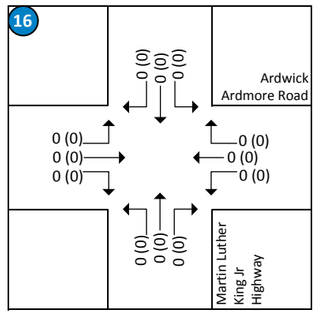
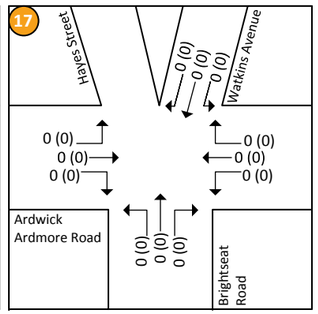
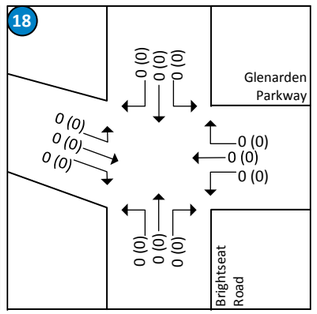
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
23 (5)
3 (20)
2
Dead End
Landover Road
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
0 (0)
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
0 (0)
Kent Town Place
4
Landover Road
23 (5)
0 (0)
3 (20)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
0 (0)
23 (5)
0 (0)
3 (20)
6
Landover Road
0 (0)
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
0 (0)
Fire House Road
7
Kenmoor Drive
Landover Road
0 (0)
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
0 (0)
Kenmoor Drive
8
Landover Road
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
Barlowe Road
9
Landover Road
0 (0)
23 (5)
0 (0)
3 (20)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
Brightseat Road
10
Landover Road
23 (5)
3 (20)
5 (39)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
0 (0)
57 (12)
8 (59)
0 (0)
0 (0)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
0 (0)
103 (21)
0 (0)
0 (0)
93 (18)
12 (88)
0 (0)
11 (78)
McCormick Drive
13
Landover Road
58 (11)
0 (0)
0 (0)
7 (49)
4 (29)
0 (0)
0 (0)
35 (7)
0 (0)
0 (0)
0 (0)
0 (0)
Lottsford Road
14
0 (0)
4 (29)
0 (0)
0 (0)
0 (0)
35 (7)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
0 (0)
0 (0)
0 (0)
4 (29)
0 (0)
35 (7)
0 (0)
0 (0)
0 (0)
0 (0)
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Evarts St
Glenarden Pkwy
704
Ardwick Ardmore Rd
Brightseat Rd
Capital Beltway
495
95
Ruby Lockhart Blvd
St Josephs Dr
202
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Englewood Business Park
(Lots 31, 32, and 35)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

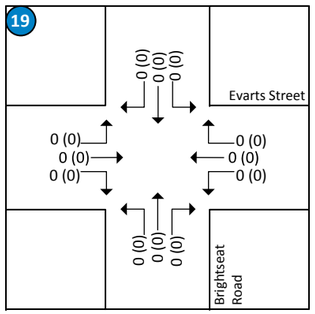

16
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
0 (0) 0 (0) 0 (0)
Ardwick Ardmore Road
Martin Luther King Jr Highway
17
Hayes Street
Watkins Avenue
Ardwick Ardmore Road
Brightseat Road
18
Glenarden Parkway
Brightseat Road
19
Evarts Street
Brightseat Road
20
Ent to OLM
MRA Access Road
Brightseat Road
1 (8)
21
Brightseat Road
Brightseat Road
Sheriff Road
Redskins Road
22
Arena Drive
Brightseat Road
23
I-95/I-495 Southbound Off-ramp
Arena Drive
I-95/I-495 Southbound On-ramp
24
I-95/I-495 Northbound On-ramp
Arena Drive
I-95/I-495 Northbound Off-ramp
FUTURE ANALYSIS ONLY
FUTURE ANALYSIS ONLY
FUTURE ANALYSIS ONLY
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Glenarden Pkwy
704
Ardwick Ardmore Rd
Brightseat Rd
Capital Beltway
495
95
Ruby Lockhart Blvd
Evarls St
Barlowe Rd
Columbia Park Rd
St Josephs Dr
202
Lottsford Rd
Landover Rd
McCormick Dr
Sheriff Rd
Redskins Rd
Brightseat Rd
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Englewood Business Park
(Lots 31, 32, and 35)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM) Turning Movement
Scale: 1" = 2000'

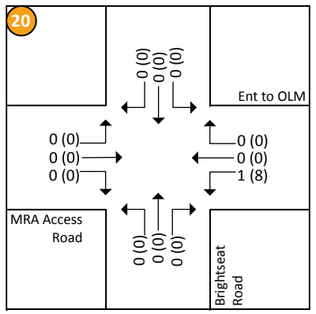

1
Old Landover Road
Landover Road
2
Dead End
Landover Road
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
Barlowe Road
9
Landover Road
Brightseat Road
10
Landover Road
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
McCormick Drive
13
Landover Road
Lottsford Road
14
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
19
20
21
22
23
24
495
95
Capital Beltway
Evarts St
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Corporate Center (Lot 4)
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

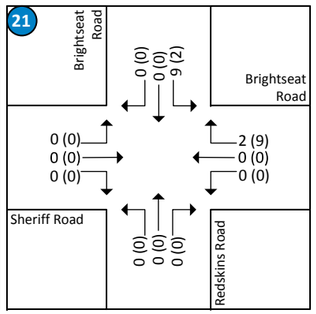


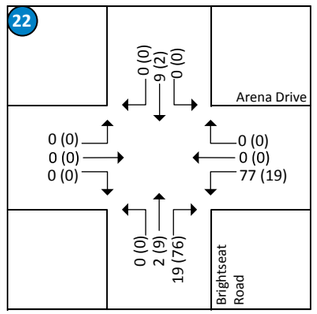


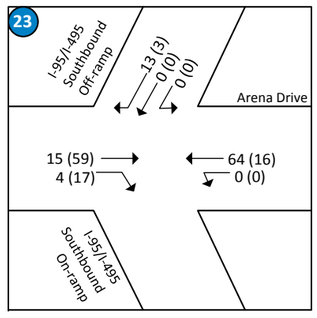


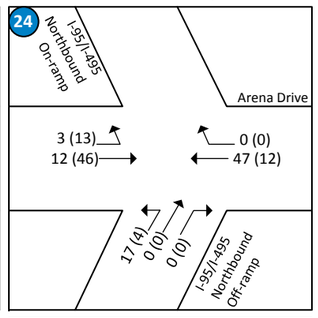












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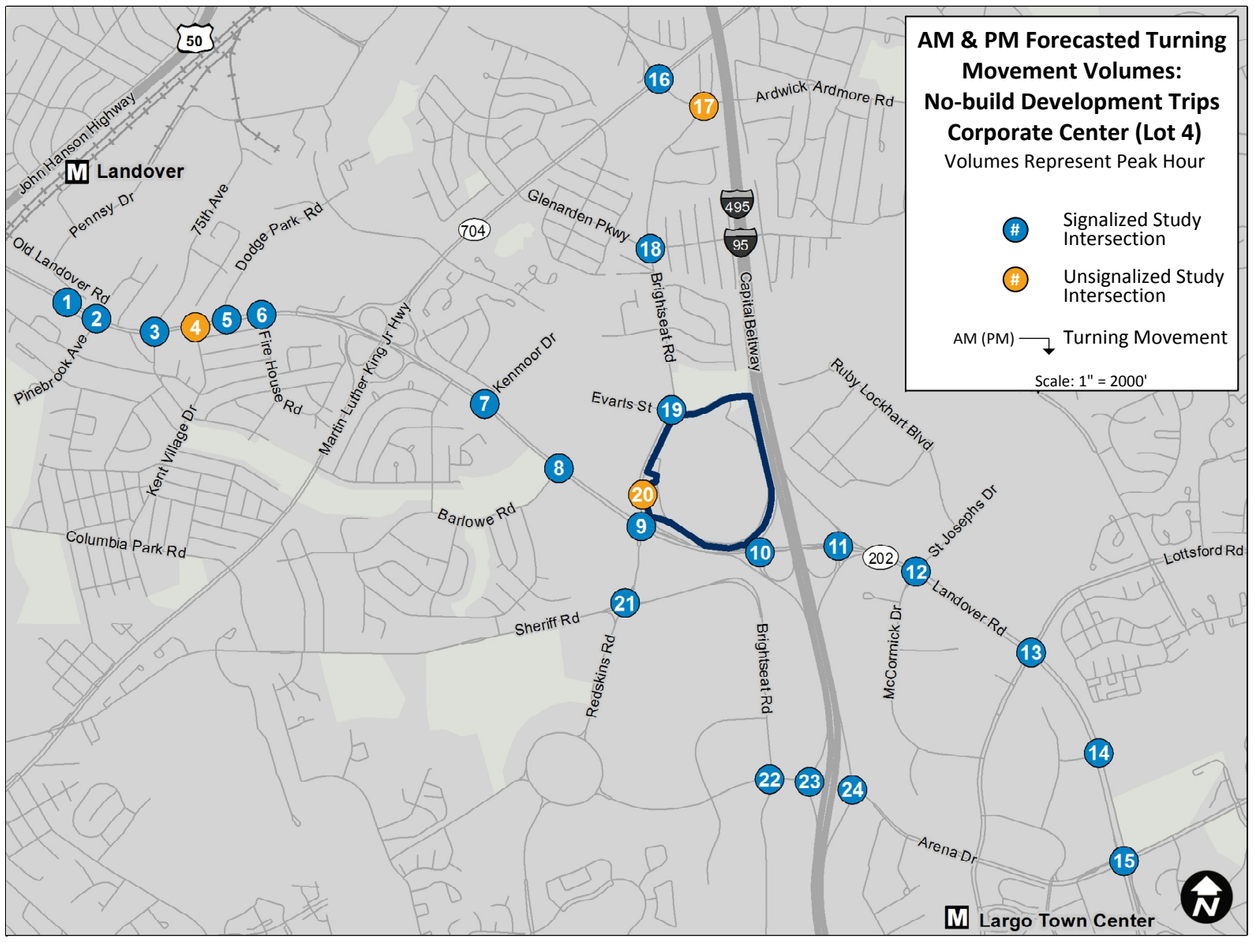

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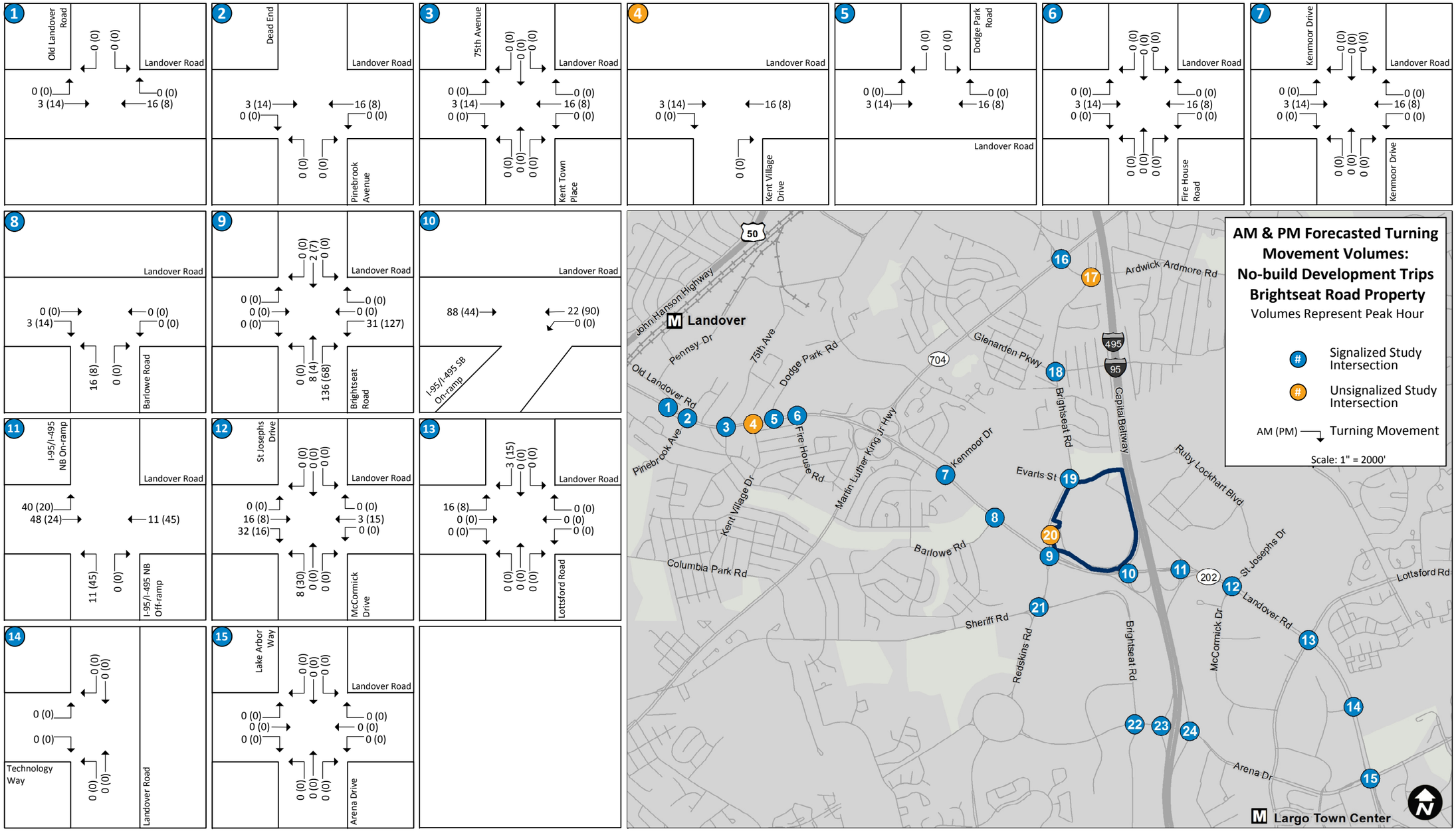
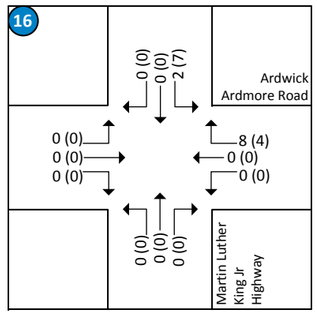
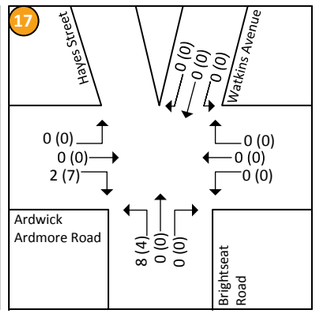
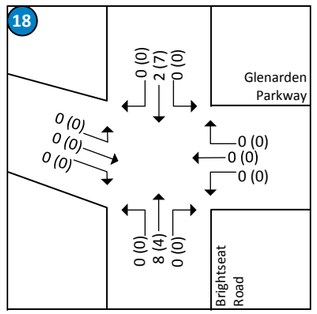
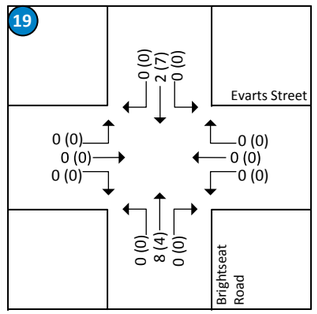
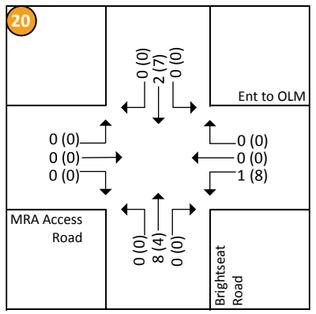

1
Old Landover Road
Landover Road
0 (0)
0 (0)
0 (0)
3 (14)
16 (8)
2
Dead End
Landover Road
3 (14)
0 (0)
16 (8)
0 (0)
0 (0)
0 (0)
Pinebrook Avenue
3
75th Avenue
Landover Road
Kent Town Place
4
Landover Road
3 (14)
0 (0)
16 (8)
0 (0)
Kent Village Drive
5
Dodge Park Road
Landover Road
6
Landover Road
Fire House Road
7
Kenmoor Drive
Landover Road
Kenmoor Drive
8
Landover Road
0 (0)
3 (14)
0 (0)
0 (0)
16 (8)
0 (0)
Barlowe Road
9
Landover Road
0 (0)
2 (7)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
31 (127)
0 (0)
8 (4)
136 (68)
Brightseat Road
10
Landover Road
88 (44)
22 (90)
0 (0)
I-95/I-495 SB On-ramp
11
I-95/I-495 NB On-ramp
Landover Road
40 (20)
48 (24)
11 (45)
11 (45)
0 (0)
I-95/I-495 NB Off-ramp
12
St Josephs Drive
Landover Road
0 (0)
16 (8)
32 (16)
0 (0)
3 (15)
0 (0)
8 (30)
0 (0)
0 (0)
McCormick Drive
13
Landover Road
16 (8)
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
Lottsford Road
14
0 (0)
0 (0)
0 (0)
0 (0)
0 (0)
Technology Way
Landover Road
15
Lake Arbor Way
Landover Road
Arena Drive
50
John Hanson Highway
Landover
Pennsy Dr
75th Ave
Dodge Park Rd
Old Landover Rd
Pinebrook Ave
Kent Village Dr
Fire House Rd
Martin Luther King Jr Hwy
Kenmoor Dr
Columbia Park Rd
Barlowe Rd
Sheriff Rd
Redskins Rd
Brightseat Rd
Glenarden Pkwy
704
Ardwick Ardmore Rd
16
17
18
495
95
Capital Beltway
Evarts St
19
20
Ruby Lockhart Blvd
202
St Josephs Dr
Lottsford Rd
Landover Rd
McCormick Dr
Arena Dr
22
23
24
Largo Town Center
AM & PM Forecasted Turning Movement Volumes:
No-build Development Trips
Brightseat Road Property
Volumes Represent Peak Hour
Signalized Study Intersection
Unsignalized Study Intersection
AM (PM)
Turning Movement
Scale: 1" = 2000'

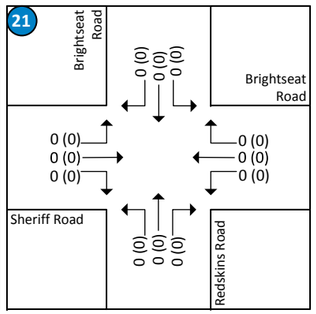


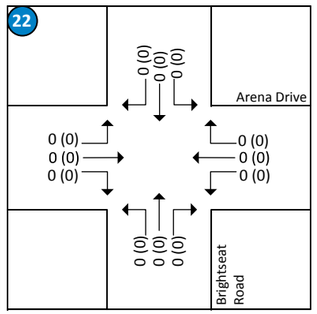


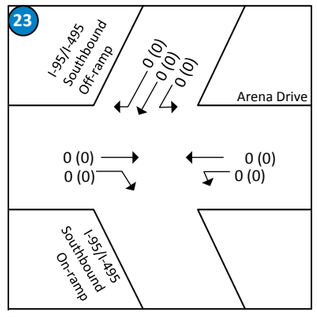


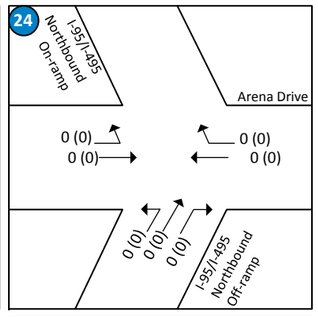












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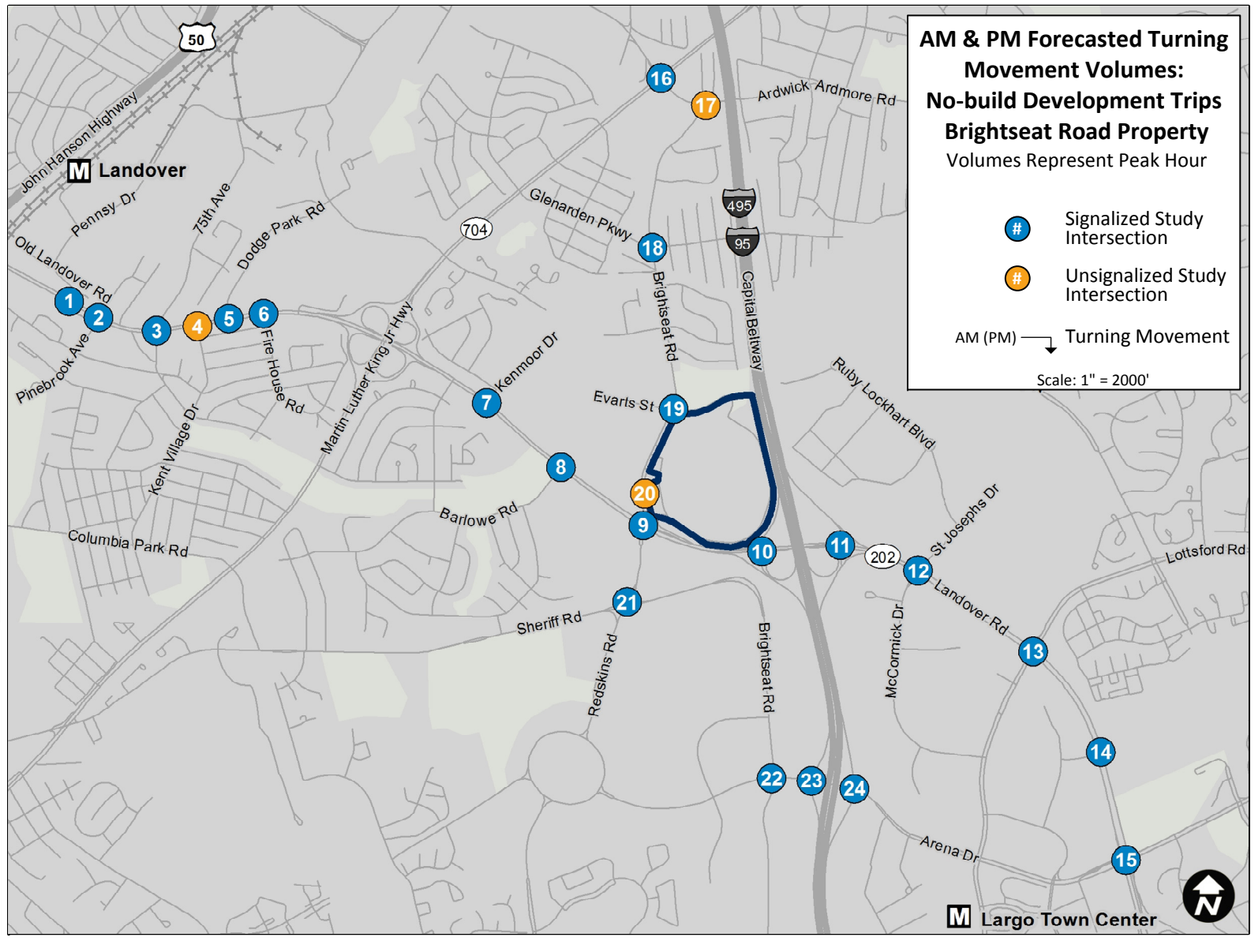

Appendix D9

Shuttle Bus Service Plan

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

D9 Shuttle Bus Service Plan Details

The Landover shuttle bus would operate between 7:00 AM and 7:00 PM on weekdays between Largo Town Center Metro Station and the Landover site. The shuttle bus route is proposed to operate via Largo Road, Lottsford Road, McCormick Drive, Landover Road, and Brightseat Road. The total roundtrip route distance would be 6.5 miles, with a roundtrip runtime of approximately 20 minutes. An additional four minutes for passenger loading and unloading would result in a total cycle time of 24 minutes. (Only unloading or loading would need to occur at each location due to the primarily one-way traffic to the site in the morning and to the metro in the evening, therefore two minutes of loading or unloading at each location.) To maintain the four-minute peak headway, six vehicles would need to be operating simultaneously (cycle time divided by desired headway). The shuttle operating headways are discussed below, and table D9-1 summarizes the details of the shuttle bus service plan. Note that the analysis table includes rounding; therefore, values may not add up to the precise value indicated.

Using the AM Peak Hour Factor (PHF) of 27 percent, approximately 156 patrons would use the shuttle during the peak AM 15-minute period. Using the PM PHF of 30 percent, approximately 162 passengers would use the shuttle bus during the peak PM 15-minute period. With a capacity of 47 passengers on a typical 40-foot bus (WMATA 2013), this would necessitate a headway of 4.5 minutes during the AM peak period and 4.3 minutes during the PM peak period. In order to maximize Metrorail and shuttle use, however, it is proposed that the shuttle buses operate at the same headway as Metrorail, or every four minutes during peak periods. Peak period definitions would be adjusted accordingly to match the primary commuting times for site patrons.

During off-peak periods, a 15-minute headway would be provided initially, with adjustments made once future ridership patterns are established. Largo Town Center Metro Station has a six-minute effective headway during the midday and evening periods, and therefore a 15-minute shuttle bus headway would serve no more than three train loads of site patrons.

Table D9-1: Landover Site Shuttle Bus Service Plan Details

#		AM Peak	Midday	PM Peak	Evening	Source/Formula
-	Time	7:00 AM – 9:00 AM	9:00 AM – 3:00 PM	3:00 PM – 6:00 PM	6:00 PM – 7:00 PM	-
1	Hours	2	6	3	1	-
Metrorail (Blue and Silver Lines)						
2	Effective Headway	4	6	4	6	WMATA 2014a
3	Site Passengers/Hour	574	-	542	-	WMATA 2014b
4	Peak Hour Factor	27.1%		29.9%		WMATA 2014b
5	Site Passengers/15 Minutes	156	-	162	-	= #3 X #4
Shuttle Bus Operation						
6	Roundtrip Length (miles)	6.5	6.5	6.5	6.5	Calculated
7	Roundtrip Runtime (min)	20.0	20.0	20.0	20.0	Peak travel time
8	Dwell Time (min)	4.0	4.0	4.0	4.0	2 minutes for loading/unloading at station and site
9	Cycle Time (min)	24.0	24.0	24.0	24.0	= #7 + #8
10	40-foot Vehicle Capacity (passengers)	47	47	47	47	WMATA 2013
11	Trips Needed per 15 Minutes	3.3	-	3.5	-	= #5 / #10
12	Headway Needed (min)	4.5	-	4.3	-	= 15 / #11
13	Headway Proposed (min)	4	15	4	15	Peak rounded down to 4 minutes to match Metrorail
14	Vehicles Needed (40-foot shuttles)	6	2	6	2	= #9 / #13 rounded

Note: Min = Minutes.
Source: Landover Site Transportation Agreement (Appendix D4); WMATA (2013, 2014a, 2014b)

D9.1 References

Washington Metropolitan Area Transportation Authority (WMATA)

2013 WMATA Title VI Service Standards, Policies and Definitions, September 2013. Available online at: http://www.wmata.com/about_metro/board_of_directors/board_docs/091213_3BTitleVI.pdf, accessed February 14, 2015.

2014a Metrorail Frequencies. Available online at: http://www.wmata.com/rail/frequency.cfm, accessed December 20, 2014.

2014b Metrorail Faregate Data. October 2014. Received on December 16, 2014.

Appendix D10

Shuttle Bus Analysis in Synchro™ and SimTraffic™

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

for

October 2015

Table D10-1: Operation Analysis with Shuttle Buses in Operation

#	Intersection and Approach	Lane Group	No-build Condition									Build with Mitigation Condition (Shuttlebus)									
			AM Peak Hour					PM Peak Hour				AM Peak Hour					PM Peak Hour				
			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV		
			Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check
9	**Landover Road & Brightseat Road (Signalized)**																				
	EB (Landover Rd)	L	60.7	E				93.5	F				84.6	F				101.0	F			
	EB (Landover Rd)	T	35.7	D				56.0	E				28.8	C				56.0	E			
	EB (Landover Rd)	R	36.8	D				16.7	B				3.3	A				25.3	C			
	EB Overall (Landover Rd)		**36.9**	**D**				**49.2**	**D**				**37.1**	**D**				**51.6**	**D**			
	WB (Landover Rd)	L	71.0	E				106.7	F				**56.1**	**E**				82.7	F			
	WB (Landover Rd)	T	27.5	C				28.1	C				58.0	E				37.4	D			
	WB (Landover Rd)	R	0.1	A				0.3	A				28.8	C				15.2	B			
	WB Overall (Landover Rd)		**32.4**	**C**				**44.4**	**D**				**46.5**	**D**				**45.4**	**D**			
	NB (Brightseat Rd)	L	54.5	D				73.4	E				50.7	D				63.5	E			
	NB (Brightseat Rd)	TR/T	43.7	D				90.5	F				60.8	E				64.0	E			
	NB (Brightseat Rd)	R	31.1	C				47.4	D				34.0	C				57.4	E			
	NB Overall (Brightseat Rd)		**45.0**	**D**				**73.6**	**E**				**45.4**	**D**				**59.6**	**E**			
	SB (Brightseat Rd)	L	64.6	E				92.8	F				52.0	D				72.7	E			
	SB (Brightseat Rd)	LT/TR	61.8	E				81.8	F				64.7	E				76.1	E			
	SB (Brightseat Rd)	R	**55.2**	**E**				64.3	E				43.5	D				61.5	E			
	SB Overall (Brightseat Rd)		**61.4**	**E**				**82.3**	**F**				**54.5**	**D**				**71.9**	**E**			
	Overall		**38.2**	**D**	**1,220**	**C**	**Pass**	**55.1**	**E**	**1,686**	**F**	**Fail**	**44.5**	**D**	**1,444**	**D**	**Pass**	**54.4**	**D**	**1,542**	**E**	**Pass**
10	**Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)**																				
	EB (Landover Rd)	T	16.2	B				67.5	E				4.9	A				38.3	D			
	EB (Landover Rd)	R	0.8	A				0.9	A				1.0	A				0.9	A			
	EB Overall (Landover Rd)		**11.0**	**B**				**46.6**	**D**				**3.6**	**A**				**28.4**	**C**			
	WB (Landover Rd)	L	18.1	B				92.4	F				18.0	B				80.1	F			
	WB (Landover Rd)	T	0.1	A				0.1	A				0.2	A				0.2	A			
	WB Overall (Landover Rd)		**3.2**	**A**				**21.4**	**C**				**2.5**	**A**				**18.4**	**B**			
	Overall		**6.5**	**A**	**1,181**	**C**	**Pass**	**27.7**	**C**	**1,832**	**F**	**Fail**	**3.5**	**A**	**974**	**A**	**Pass**	**20.0**	**B**	**1,674**	**F**	**Fail**
11	**Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)**																				
	EB (Landover Rd)	L	193.8	F				116.0	F				126.6	F				88.9	F			
	EB (Landover Rd)	T	12.6	B				12.9	B				15.5	B				10.6	B			
	EB (Landover Rd)	R	0.1	A				**0.0**	**A**				0.1	A				4.8	A			
	EB Overall (Landover Rd)		**15.8**	**B**				13.9	B				**16.8**	**B**				**10.8**	**B**			
	WB (Landover Rd)	T	48.3	D				100.0	F				14.6	B				21.1	C			
	WB Overall (Landover Rd)		**48.3**	**D**				**100.0**	**F**				**14.6**	**B**				**21.1**	**C**			
	NB (I-95/I-495 NB Off-Ramp)	L	86.0	F				160.6	F				63.5	E				75.6	E			
	NB (I-95/I-495 NB Off-Ramp)	R	154.6	F				162.5	F				50.7	D				0.5	A			
	NB Overall (I-95/I-495 NB Off-Ramp)		**112.3**	**F**				**161.3**	**F**				**60.7**	**E**				**50.7**	**D**			
	Overall		**45.6**	**D**	**1,666**	**F**	**Fail**	**72.4**	**E**	**1,863**	**F**	**Fail**	**28.2**	**C**	**1,471**	**E**	**Pass**	**21.3**	**C**	**1,359**	**D**	**Pass**

Table D10-1: Operation Analysis with Shuttle Buses in Operation (continued)

#	Intersection and Approach	Lane Group	No-build Condition									Build with Mitigation Condition (Shuttlebus)									
			AM Peak Hour					PM Peak Hour				AM Peak Hour					PM Peak Hour				
			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV		
			Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check
12	**Landover Road & St Josephs Drive/McCormick Drive (Signalized)**																				
	EB (Landover Rd)	L	109.2	F				138.1	F				108.2	F				131.7	F			
	EB (Landover Rd)	T	21.3	C				39.6	D				29.1	C				37.5	D			
	EB (Landover Rd)	R	0.8	A				0.1	A				0.9	A				0.2	A			
	EB Overall (Landover Rd)		**45.8**	**D**				**70.8**	**E**				**48.7**	**D**				**64.6**	**E**			
	WB (Landover Rd)	L	80.9	F				129.9	F				82.0	F				93.5	F			
	WB (Landover Rd)	T	57.1	E				75.1	E				61.2	E				87.7	F			
	WB (Landover Rd)	R	13.9	B				219.3	F				10.1	B				71.7	E			
	WB Overall (Landover Rd)		**54.0**	**D**				**102.7**	**F**				**54.1**	**D**				**84.8**	**F**			
	NB (McCormick Dr)	L	61.3	E				151.1	F				61.8	E				163.1	F			
	NB (McCormick Dr)	LT	121.4	F				163.9	F				126.0	F				176.1	F			
	NB (McCormick Dr)	R	0.0	A				0.2	A				0.0	A				0.2	A			
	NB Overall (McCormick Dr)		**84.7**	**F**				**122.2**	**F**				**86.0**	**F**				**132.5**	**F**			
	SB (St Josephs Dr)	L	60.2	E				65.8	E				60.2	E				64.5	E			
	SB (St Josephs Dr)	LT	111.3	F				69.3	E				111.3	F				67.5	E			
	SB (St Josephs Dr)	R	43.9	D				108.1	F				43.6	D				99.1	F			
	SB Overall (St Josephs Dr)		**57.9**	**E**				**93.7**	**F**				**57.8**	**E**				**87.1**	**F**			
	Overall		**52.3**	**D**	**1,546**	**E**	**Pass**	**89.9**	**F**	**1,921**	**F**	**Fail**	**53.7**	**D**	**1,569**	**E**	**Pass**	**82.2**	**F**	**1,910**	**F**	**Fail**
20	**Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd)** [a]																				
	EB (MRA Access Rd)	LTR	12.0	B				14.0	B				16.2	B				20.5	C			
	EB (MRA Access Rd)	R	-	-				-	-				16.1	B				20.3	20			
	EB Overall (MRA Access Rd)		**12.0**	**B**				**14.0**	**B**				**16.1**	**B**				**20.4**	**C**			
	WB (Ent to OLM)	LT	17.0	C				22.8	C				-	-				-	-			
	WB (Ent to OLM)	R	0.0	A				0.0	A				-	-				-	-			
	WB Overall (Ent to OLM)		**17.0**	**C**				**22.8**	**C**				**-**	**-**				**-**	**-**			
	NB (Brightseat Rd)	L	-	-				-	-				29.7	C				31.9	C			
	NB (Brightseat Rd)	LTR / TR	0.7	A				0.6	A				0.1	A				0.0	A			
	NB (Brightseat Rd)	R	-	-				-	-				0.5	A				0.0	A			
	NB Overall (Brightseat Rd)		**0.2**	**-**				**0.2**	**-**				**0.4**	**A**				**0.5**	**A**			
	SB (Brightseat Rd)	L	8.3	A				8.9	A				-	-				-	-			
	SB (Brightseat Rd)	TR	-	-				-	-				9.9	A				8.1	A			
	SB Overall (Brightseat Rd)		**0.0**	**-**				**0.0**	**-**				**9.9**	**A**				**8.1**	**A**			
	Overall		**0.8**	**-**	**N/A**	**N/A**	**Pass**	**0.7**	**-**	**N/A**	**N/A**	**Pass**	**2.8**	**A**	**300**	**A**	**Pass**	**5.6**	**A**	**393**	**A**	**Pass**

Table D10-1: Operation Analysis with Shuttle Buses in Operation (continued)

#	Intersection and Approach	Lane Group	No-build Condition										Build with Mitigation Condition (Shuttlebus)									
			AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV			HCM 2000		CLV		
			Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check	Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	Check
25	**Brightseat Road & Driveway/Site West Exit (Signalized)** [b]																					
	EB (Driveway)	LTR	-	-				-	-				20.3	C				23.7	C			
	EB Overall (Driveway)		**-**	**-**				**-**	**-**				**20.3**	**C**				**23.7**	**C**			
	WB (FBI Exit)	L	-	-				-	-				16.6	B				16.5	B			
	WB (FBI Exit)	R	-	-									-	-				-	-			
	WB Overall (Site Exit)		**-**	**-**				**-**	**-**				**16.6**	**B**				**16.5**	**B**			
	NB (Brightseat Rd)	T	-	-				-	-				10.1	B				15.4	B			
	NB Overall (Brightseat Rd)		**-**	**-**				**-**	**-**				**10.1**	**B**				**15.4**	**B**			
	SB (Brightseat Rd)	T	-	-				-	-				9.9	A				15.5	B			
	SB Overall (Brightseat Rd)		**-**	**-**				**-**	**-**				**9.9**	**A**				**15.5**	**B**			
	Overall		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**10.9**	**B**	**248**	**A**	**Pass**	**15.8**	**B**	**450**	**A**	**Pass**

Notes:

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

LOS = Level of Service

LTR = left / through / right lanes

LTR/LTR = No-Build/Build with Mitigation

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections or approaches operating at unacceptable conditions.

[a] Intersection would operate as a TWSC under the No-build Condition and signalized under the Build with Mitigation Condition.

[b] Intersection would be added as part of the Build with Mitigation Condition

Table D10-2: Queuing Analysis with Shuttle Buses in Operation

#	Intersection & Approach	Lane Group	Turning Bay/Link Length (feet)	No-build Condition				Build with Shuttle Mitigation Condition			
				AM Peak		PM Peak		AM Peak		PM Peak	
				50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
9	**Landover Road & Brightseat Road (Signalized)**										
	EB (Landover Rd)	L	600	36	89	59	250	225	525	72	96
	EB (Landover Rd)	T	906	278	361	819	1471	372	349	644	464
	EB (Landover Rd)	R	400	1	84	135	997	0	34	253	334
	WB (Landover Rd)	L	600	215	487	~465	366	209	346	462	390
	WB (Landover Rd)	T	1,775	666	385	473	353	~759	778	516	380
	WB (Landover Rd)	R	1,524	0	-	0	-	872	289	22	15
	NB (Brightseat Rd)	L	376	169	215	200	#258	192	241	178	232
	NB (Brightseat Rd)	TR/T	502	89	177	201	323	112	171	105	324
	NB (Brightseat Rd)	R	451	109	164	239	361	86	118	563	405
	SB (Brightseat Rd)	L	362	136	165	271	#406	120	183	274	312
	SB (Brightseat Rd)	LT/TR	368	136	189	267	331	79	173	191	370
	SB (Brightseat Rd)	R	350	0	16	0	25	0	76	106	340
10	**Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)**										
	EB (Landover Rd)	T	1,775	404	225	~944	#2182	78	232	~642	1155
	EB (Landover Rd)	R	1,775	17	292	40	#2199	144	166	54	1242
	WB (Landover Rd)	L	700	202	211	~584	#812	197	195	~578	646
	WB (Landover Rd)	T	1,170	0	-	0	830	0	76	0	182
11	**Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)**										
	EB (Landover Rd)	L	425	~70	154	58	226	63	133	55	154
	EB (Landover Rd)	T	1,170	631	668	764	#1491	351	505	624	#1270
	EB (Landover Rd)	R	250	0	150	0	132	0	#321	42	176
	WB (Landover Rd)	T	282	~1363	#366	~1904	#575	212	#340	660	#483
	NB (I-95/I-495 NB Off-Ramp)	L	567	358	#364	~648	#424	541	426	382	372
	NB (I-95/I-495 NB Off-Ramp)	R	650	~430	#386	~567	#384	323	454	0	487
12	**Landover Road & St Josephs Drive/McCormick Drive (Signalized)**										
	EB (Landover Rd)	L	703	~426	416	~618	413	~435	451	~602	570
	EB (Landover Rd)	T	730	188	260	641	312	252	242	694	505
	EB (Landover Rd)	R	550	0	-	0	-	0	10	0	0
	WB (Landover Rd)	L	250	223	#346	45	#299	223	#349	41	#276
	WB (Landover Rd)	T	1,320	~858	#1655	~690	#1663	~883	#1672	~693	#1633
	WB (Landover Rd)	R	500	5	#736	310	#717	25	#688	373	#698
	NB (McCormick Dr)	L	375	134	79	~398	#427	71	165	~420	#425
	NB (McCormick Dr)	LT	500	187	330	~406	#513	192	355	~430	#519
	NB (McCormick Dr)	R	250	0	134	0	#382	0	170	0	#388
	SB (St Josephs Dr)	L	564	42	123	321	#736	42	96	319	#674
	SB (St Josephs Dr)	LT	829	194	415	337	#1089	194	332	335	#935
	SB (St Josephs Dr)	R	829	336	424	~1146	#1002	333	456	~1102	#891

Table D10-2: Queuing Analysis with Shuttle Buses in Operation (continued)

#	Intersection & Approach	Lane Group	Turning Bay/Link Length (feet)	No-build Condition				Build with Shuttle Mitigation Condition			
				AM Peak		PM Peak		AM Peak		PM Peak	
				50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)	50th Percentile (feet)	95th Percentile (feet)
20	**Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd)** [a]										
	EB (MRA Access Rd)	LTR/L	190	-	47	-	81	5	34	4	47
	EB (MRA Access Rd)	R	25	-	-	-	-	0	#51	0	#41
	WB (Ent to OLM)	LT	-	-	9	-	34	-	-	-	-
	WB (Ent to OLM)	R	-	-	-	-	-	-	-	-	-
	NB (Brightseat Rd)	L	-	-	-	-	-	3	17	3	20
	NB (Brightseat Rd)	LTR /T	-	-	12	-	6	0	-	0	-
	NB (Brightseat Rd)	TR	-	-	-	-	-	0	35	0	30
	NB (Brightseat Rd)	R	368	-	-	-	-	0	80	0	25
	SB (Brightseat Rd)	L	-	-	0	-	0	-	-	-	-
	SB (Brightseat Rd)	T	-	-	-	-	-	-	-	-	-
	SB (Brightseat Rd)	TR	458	-	4	-	99	29	79	47	207
25	**Brightseat Road & Driveway/Site West Exit (Signalized)** [b]										
	EB (Driveway)	LTR	372	-	-	-	-	0	15	0	14
	WB (FBI Exit)	L	439	-	-	-	-	7	50	55	146
	WB (FBI Exit)	R	-	-	-	-	-	-	-	-	-
	NB (Brightseat Rd)	T	159	-	-	-	-	22	52	35	91
	SB (Brightseat Rd)	T	484	-	-	-	-	19	42	36	76

Notes:

~ 50th percentile volume exceeds capacity, queue is theoretically infinitive.

95th percentile volume exceeds capacity, queue may be longer.

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

LTR = left / through / right lanes

LTR/LTR = No-Build/Build with Mitigation

TWSC = Two-way STOP-Controlled unsignalized intersection

Red cells denote approaches and lane groups whose queuing length exceeds capacity.

[a] Intersection would operate as a TWSC under the No-build Condition and signalized under the Build with Mitigation Condtion.

[b] Intersection would be added as part of the Build with Mitigation Condition

Appendix D11

TransModeler™ Validation and Calibration

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

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D11 TransModeler™ Validation and Calibration

D11.1 Introduction

TransModeler™ Traffic Simulation Software (TransModeler™) was used to provide the entry control facility (ECF) results once the external roadway mitigation measures were determined. Prior to testing various ECF designs, the software first had to be developed to model the existing conditions through a process known as model validation and calibration. This process involves creating a model of the existing roadway study area network, validating how well a simulation compares to the actual operations, and adjusting or calibrating the model until the simulation closely resembles the network.

This appendix provides the details for developing the existing network, validating the results, and calibrating the model, if necessary.

D11.2 Developing the Existing Condition Model

The Landover study area was created into TransModeler™ (also referred to as coded into the model) and contained the intersections and adjacent roadway segments along the following roadways: Landover Road between Old Landover Road to Arena Drive, Brightseat Road between Arena Drive to Ardwick-Ardmore Road, Ardwick-Ardmore Road between Brightseat Road and Martin Luther King Jr. Highway, and Arena Drive between Brightseat Road and the Interstate (I)-95/I-495 northbound ramps. Also included in the model were the I-95/I-495 mainline, collector distributor roads, and ramps serving the Arena Drive and Landover Road interchanges as well as the northbound on-ramp and southbound off-ramp serving Central Avenue. Links representing the Build Condition are also shown such as the Evarts Street Bridge, a new south exit from the Landover site to the Brightseat Road, and the Landover site conceptual roadway network. However, no vehicle volumes were modeled on these links during validation and calibration. Figure D11-1 shows the modeled study area.

TransModeler™ is capable of modeling key roadway elements such as the number of lanes, lane width, speed, length of turning lanes, type of pavement striping (solid line, dashed line, barrier), channelized right-turn lanes matched to the actual or planned curve radius, lane assignments through an intersection by lane, and traffic signal timings by lane group (left, through, or right). In addition, TransModeler™ can model an ECF by lane, freeway facilities, and any other special roadway design. Each element was coded to reflect the existing condition as accurately as possible.

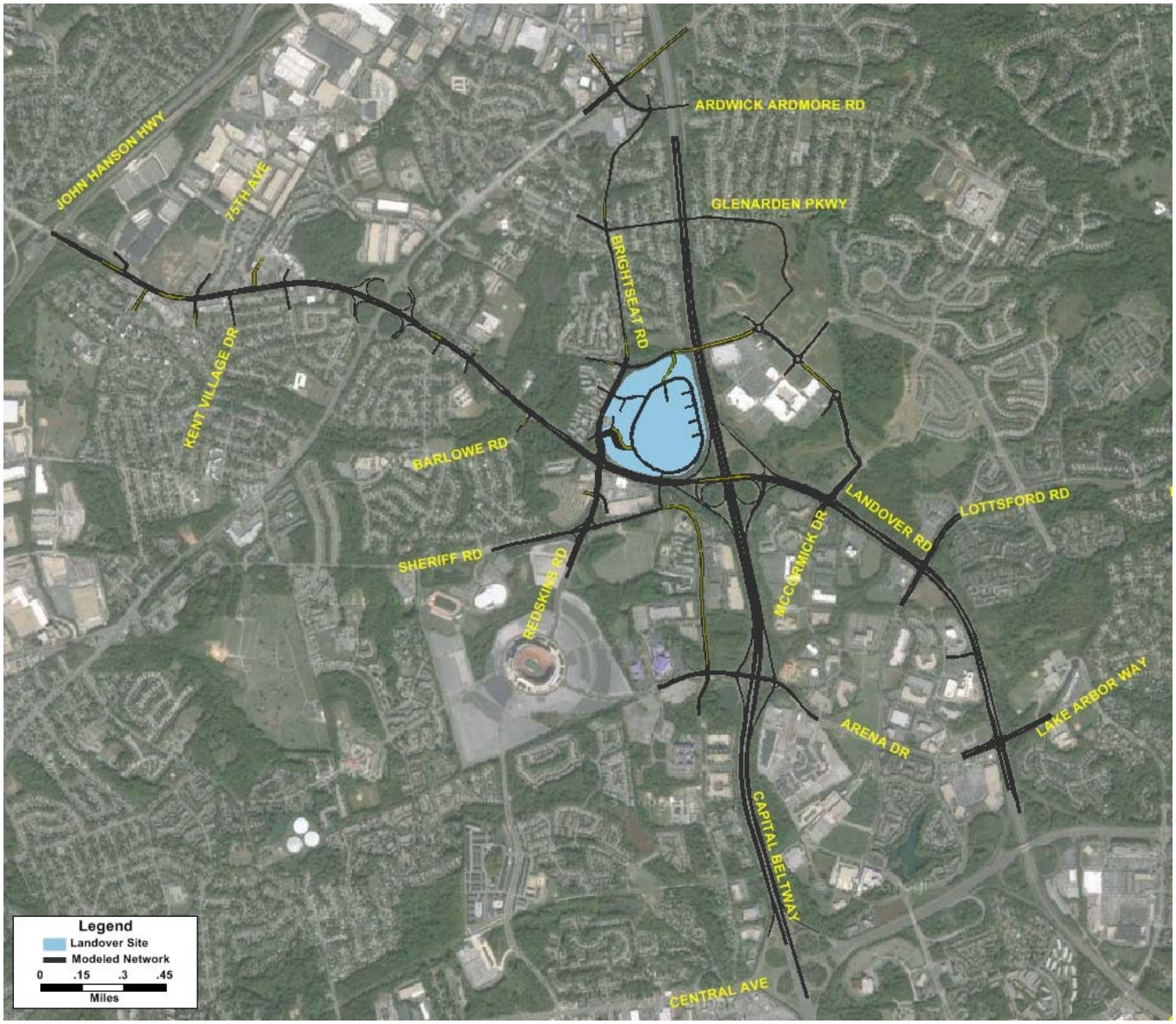
Two methods of modeling the vehicle volumes were used: (a) the hourly vehicle volumes obtained through the existing condition intersection-based manual turning movement counts or Interstate facility-based automatic traffic recorder counts, and (b) vehicle classification counts at key study area entrance locations.

D11.2.1 Vehicle Volumes

The hourly vehicle volume counts were entered for each intersection in the model and at all Interstate facilities providing a complete network of vehicle trips through the study area. Because vehicle trips occur from an origin to a destination, TransModeler™ develops a specific origin and destination by vehicle to match the number of vehicle trips per hour coded into the model by lane group. Depending on the network complexity, the conversion from lane group volumes to origin-destination pairs can result in modeled vehicle volumes differing from the actual volumes and thus require calibration or adjustments to rectify the imbalance.

The hourly volumes entered into the model are contained in figure 3-7 (intersection turning movement volumes) in section 3.1.4 of the Transportation Impact Assessment (TIA) and figure 3-17 (Interstate facilities) in section 3.7.6 of the TIA report.

Figure D11-1: Modeled Study Area



D11.2.2 Vehicle Classification

Included in the vehicle volumes are trucks, buses, passenger vehicles, small trucks, and motorcycles. Each of these vehicle types have different lengths and thus can cover more or less roadway space. A typical full-size tractor trailer can be 53 feet long while a typical passenger vehicle can be less than 25 feet long. The vehicle mix can affect the traffic operations, especially if the roadway contains a high volume of larger vehicles. Each of these vehicle types also have different acceleration rates from a stopped position and some can take longer to reach the speed limit than others, this too can also affect the traffic operations.

Vehicle counts separated into 13 classifications were obtained through the Maryland State Highway Administration (SHA) website covering key entrance points serving the study area network (Maryland SHA 2015). The classification counts consisted of locations serving each of the corridors modeled including Landover Road, Brightseat Road, Arena Drive, and Martin Luther King Jr. Highway. These classifications provide five different variations of single-unit trucks and four different variations of multi-trailer trucks. For this study, the 13 classifications were combined into the following groups to create a simple uniform classification system ready to be entered into TransModeler™:

- Class 1: Motorcycles
- Class 2: Passenger vehicles
- Class 3: Light Trucks
- Class 4: Buses
- Classes 5-9: Single-Unit Trucks
- Classes 10-13: Multi-Trailer Trucks

TransModeler™ also provides an opportunity to breakout the passenger vehicles into three categories, high, middle, and low performance passenger cars, to better simulate acceleration and deceleration speeds. Following the software's default split among the three passenger vehicle classes, the total passenger vehicle volumes were distributed among three categories resulting in 33.33% of the passenger vehicle volume assigned to high performance, 44.44% of the passenger vehicle volume assigned to middle performance, and 22.22% of the passenger vehicle volume assigned to low performance.

Each vehicle classification count provided hourly counts for each of the 13 vehicle types. The highest total hourly AM (either 7:00 or 8:00 AM) and PM (5:00 PM) peak hour volumes were extracted and grouped to calculate the percentage for each class by peak hour by location. Table D11-1 contains a summary of the classification counts by location. All other entering locations used the average of the non-Interstate classification counts listed at the bottom of table D11-1.

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Table D11-1: Summary of Vehicle Classifications

Location	Direction	Peak Hour	Motorcycles	Passenger Vehicle (performance)			Light Trucks	Buses	Single-Unit Trucks	Multi-Trailer Trucks	Total
				High	Middle	Low					
Landover Road - West of Old Landover Road	Eastbound	AM	0%	29%	38%	19%	10%	2%	2%	0%	100%
		PM	0%	31%	41%	20%	7%	0%	1%	0%	100%
Landover Road – South of Arena Drive	Northbound	AM	0%	29%	38%	19%	10%	2%	2%	0%	100%
		PM	0%	30%	39%	20%	10%	0%	1%	0%	100%
Arena Drive – West of Brightseat Road	Eastbound	AM	0%	28%	37%	18%	11%	2%	4%	0%	100%
		PM	0%	30%	40%	20%	8%	0%	2%	0%	100%
Arena Drive – East of I-95/I-495 Northbound Ramps	Westbound	AM	0%	27%	36%	18%	14%	2%	3%	0%	100%
		PM	0%	28%	37%	19%	11%	1%	4%	0%	100%
Martin Luther King Jr. Highway – south of Ardwick Ardmore Road	Northbound	AM	0%	28%	37%	18%	10%	2%	5%	0%	100%
		PM	0%	30%	39%	20%	10%	0%	1%	0%	100%
Martin Luther King Jr. Highway – north of Ardwick Ardmore Road	Southbound	AM	0%	28%	37%	18%	12%	1%	4%	0%	100%
		PM	0%	30%	40%	20%	8%	0%	2%	0%	100%
I-95/I-495 – south of Central Avenue Interchange	Northbound	AM	0.5%	27.5%	37%	18%	11.5%	0.5%	5%	0%	100%
		PM	0.5%	28%	37%	19%	10%	0.5%	5%	0%	100%
I-95/I-495 – north of Landover Road Interchange	Southbound	AM	0%	26%	35%	17%	13%	1%	8%	0%	100%
		PM	0%	28%	37%	18.5%	10.5%	1%	5%	0%	100%
Average of non-Interstate counts		AM	0%	28%	37%	19%	11%	2%	3%	0%	100%
		PM	0%	30%	39%	20%	9%	0%	2%	0%	100%

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D11.2.3 Validation Process

Once the network was completed by entering or coding the hourly volumes for each turning movement and designating vehicle classifications for each entrance to the network, the next step was the validation process. The validation process included visually observing the simulations, comparing the simulated vehicle turning movement volumes to the actual coded vehicle turning movement volumes, and comparing the simulated travel times to the actual travel times.

D11.2.3.1 Simulation Observation

Simulations were run to determine if the vehicle operations in the model looked reasonable based on site visit observations. Any unusual operation issues were quickly determined and addressed by fixing coding errors such as lane assignments at intersections or traffic signal timings. The observations also allowed an opportunity to catch other minor coding errors.

D11.2.3.2 Simulated Vehicle Volumes Versus Actual Vehicle Volumes

Prior to conducting the volume tests, the simulation was run 25 times to develop the minimum number of runs to be statistically accurate within plus or minus two percent at the 95th percentile confidence interval. Following the simulation runs, the simulated vehicle turning movement volumes were extracted based on an average of the results from the minimum number of simulation runs. The statistically accurate results were then compared to the actual turning movement volumes coded to perform each of the validation tests.

The next step in the validation process included comparing the simulated turning movement volumes by intersection approach and by intersection as a whole to actual vehicle volumes. Based on the Federal Highway Administration's (FHWA) *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software*, three validation tests were performed to determine the accuracy of the simulation results when compared to the Exiting Condition (FHWA 2004). The first test compared the TransModeler™ simulation approach volumes at all intersections to the Existing Condition volumes for all approaches. If over 85 percent of the approaches had less than a 15 percent difference, then the model passed the first validation test. The second test compared the TransModeler™ simulation overall intersection volumes to the Existing Condition overall intersection volumes. If over 85 percent of the intersections had less than a 15 percent difference in overall intersection volume, then the model passed the second validation test. The third test compared the sum of all TransModeler™ simulation approach intersection volumes to the sum of all Existing Condition approach intersection volumes. If the difference between volume sums was less than 5 percent, the model passed the third validation test.

According to the results of the validation tests, the Existing Condition model passed all three tests. The approach-based test scored higher than 97 percent for both peak periods, meaning greater than 97 percent of intersection approaches in the study area had less than a 15 percent difference between the simulation and Existing Condition volumes. The intersection-based test scored 100 percent, meaning 100 percent of the intersections had less than a 15 percent difference in overall intersection volume. The approach volume summation scored no higher than 3 percent, meaning the overall difference between intersection volume sums was less than 5 percent. Table D11-2 contains the validation test results for each intersection and table D11-3 contains the validation test result summary.

Table D11-2: Approach-based Validation Test Results

#	Intersection and Approach	AM Peak Hour				PM Peak Hour			
		Existing Volume	Simulated Volume	Difference	Less than 15%	Existing Volume	Simulated Volume	Difference	Less than 15%
		Vehicles				Vehicles			
1	**Landover Road & Old Landover Road (Signalized)**								
	EB (Landover Rd)	1,449	1,441	-0.58%	Pass	2,316	2,297	-0.80%	Pass
	WB (Landover Rd)	2,386	2,349	-1.55%	Pass	1,563	1,550	-0.84%	Pass
	SB (Old Landover Rd)	211	208	-1.26%	Pass	301	295	-1.91%	Pass
	Overall	4,046	3,998	-1.19%	Pass	4,180	4,143	-0.90%	Pass
2	**Landover Road & Pinebrook Avenue (Signalized)**								
	EB (Landover Rd)	1,479	1,475	-0.25%	Pass	2,511	2,503	-0.31%	Pass
	WB (Landover Rd)	2,400	2,355	-1.87%	Pass	1,416	1,396	-1.43%	Pass
	NB (Pinebrook Ave)	256	254	-0.84%	Pass	208	210	0.72%	Pass
	Overall	4,135	4,084	-1.23%	Pass	4,135	4,108	-0.64%	Pass
3	**Landover Road & Kent Town Place/75th Avenue (Signalized)**								
	EB (Landover Rd)	1,401	1,392	-0.61%	Pass	2,127	2,092	-1.66%	Pass
	WB (Landover Rd)	2,470	2,418	-2.12%	Pass	1,468	1,436	-2.15%	Pass
	NB (Kent Town Pl)	298	292	-1.98%	Pass	257	254	-1.17%	Pass
	SB (75th Ave)	291	285	-2.15%	Pass	375	373	-0.60%	Pass
	Overall	4,460	4,387	-1.64%	Pass	4,227	4,155	-1.71%	Pass
4	**Landover Road & Kent Village Drive (TWSC)**								
	EB (Landover Rd)	1,467	1,446	-1.40%	Pass	2,472	2,435	-1.51%	Pass
	WB (Landover Rd)	2,470	2,403	-2.71%	Pass	1,468	1,436	-2.16%	Pass
	NB (Kent Village Dr)	64	64	-0.31%	Pass	63	63	-0.79%	Pass
	Overall	4,001	3,913	-2.19%	Pass	4,003	3,933	-1.74%	Pass
5	**Landover Road & Dodge Park Road (Signalized)**								
	EB (Landover Rd)	1,540	1,512	-1.80%	Pass	2,488	2,440	-1.92%	Pass
	WB (Landover Rd)	2,351	2,279	-3.04%	Pass	1,359	1,315	-3.23%	Pass
	SB (Dodge Park Rd)	206	202	-1.97%	Pass	255	251	-1.47%	Pass
	Overall	4,097	3,994	-2.52%	Pass	4,102	4,007	-2.33%	Pass
6	**Landover Road & Fire House Road (Signalized)**								
	EB (Landover Rd)	1,499	1,472	-1.80%	Pass	2,390	2,330	-2.50%	Pass
	WB (Landover Rd)	2,331	2,269	-2.64%	Pass	1,447	1,394	-3.70%	Pass
	NB (Fire House Rd)	102	100	-2.40%	Pass	117	116	-0.80%	Pass
	SB (Fire House Rd)	90	87	-2.78%	Pass	157	156	-0.96%	Pass
	Overall	4,022	3,929	-2.32%	Pass	4,111	3,995	-2.82%	Pass
7	**Landover Road & Kenmoor Drive (Signalized)**								
	EB (Landover Rd)	1,442	1,412	-2.11%	Pass	2,205	2,182	-1.05%	Pass
	WB (Landover Rd)	2,235	2,151	-3.74%	Pass	1,504	1,450	-3.62%	Pass
	NB (Kenmoor Dr)	2	2	0.00%	Pass	39	38	-2.24%	Pass
	SB (Kenmoor Dr)	43	43	-0.23%	Pass	83	82	-0.75%	Pass
	Overall	3,722	3,608	-3.07%	Pass	3,831	3,752	-2.07%	Pass

Table D11-2: Approach-based Validation Test Results (continued)

#	Intersection and Approach	AM Peak Hour				PM Peak Hour			
		Existing Volume	Simulated Volume	Difference	Less than 15%	Existing Volume	Simulated Volume	Difference	Less than 15%
		Vehicles				Vehicles			
8	**Landover Road & Barlowe Road (Signalized)**								
	EB (Landover Rd)	2,320	2,236	-3.64%	Pass	2,157	2,129	-1.31%	Pass
	WB (Landover Rd)	1,310	1,291	-1.44%	Pass	1,561	1,502	-3.79%	Pass
	NB (Barlowe Rd)	208	205	-1.23%	Pass	192	189	-1.50%	Pass
	Overall	3,838	3,732	-2.76%	Pass	3,910	3,820	-2.31%	Pass
9	**Landover Road & Brightseat Road (Signalized)**								
	EB (Landover Rd)	1,300	1,263	-2.88%	Pass	2,074	1,999	-3.62%	Pass
	WB (Landover Rd)	2,372	2,312	-2.51%	Pass	2,108	2,050	-2.78%	Pass
	NB (Brightseat Rd)	839	748	-10.87%	Pass	1,131	1,070	-5.40%	Pass
	SB (Brightseat Rd)	435	379	-12.95%	Pass	660	606	-8.20%	Pass
	Overall	4,946	4,701	-4.94%	Pass	5,973	5,724	-4.16%	Pass
10	**Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)**								
	EB (Landover Rd)	930	904	-2.80%	Pass	1,747	1,730	-0.96%	Pass
	WB (Landover Rd)	2,175	2,089	-3.98%	Pass	2,172	2,066	-4.87%	Pass
	Overall	3,105	2,993	-3.62%	Pass	3,919	3,796	-3.13%	Pass
11	**Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)**								
	EB (Landover Rd)	1,660	1,651	-0.55%	Pass	2,339	2,319	-0.85%	Pass
	WB (Landover Rd)	1,754	1,713	-2.36%	Pass	1,572	1,503	-4.37%	Pass
	NB (I-95/I-495 NB Off-Ramp)	658	600	-8.80%	Pass	904	841	-6.93%	Pass
	Overall	4,072	3,964	-2.66%	Pass	4,815	4,664	-3.14%	Pass
12	**Landover Road & St Josephs Drive/McCormick Drive (Signalized)**								
	EB (Landover Rd)	1,974	1,944	-1.51%	Pass	2,618	2,572	-1.75%	Pass
	WB (Landover Rd)	2,635	2,626	-0.36%	Pass	1,862	1,829	-1.77%	Pass
	NB (McCormick Dr)	148	144	-2.36%	Pass	653	656	0.50%	Pass
	SB (St Josephs Dr)	281	296	5.20%	Pass	828	844	1.93%	Pass
	Overall	5,038	5,010	-0.56%	Pass	5,961	5,902	-1.00%	Pass
13	**Landover Road & Lottsford Road (Signalized)**								
	EB (Landover Rd)	1,301	1,301	-0.04%	Pass	2,258	2,236	-0.99%	Pass
	WB (Landover Rd)	2,279	2,281	0.07%	Pass	1,904	1,880	-1.28%	Pass
	NB (Lottsford Rd)	386	385	-0.26%	Pass	838	848	1.22%	Pass
	SB (Lottsford Rd)	1,741	1,670	-4.07%	Pass	935	930	-0.56%	Pass
	Overall	5,707	5,636	-1.24%	Pass	5,935	5,893	-0.70%	Pass
14	**Landover Road & Technology Way (Signalized)**								
	EB (Technology Way)	82	79	-3.17%	Pass	561	539	-3.88%	Pass
	NB (Landover Rd)	2,348	2,364	0.67%	Pass	1,605	1,596	-0.56%	Pass
	SB (Landover Rd)	1,423	1,422	-0.10%	Pass	2,160	2,165	0.21%	Pass
	Overall	3,853	3,865	0.30%	Pass	4,326	4,300	-0.60%	Pass

Table D11-2: Approach-based Validation Test Results (continued)

#	Intersection and Approach	AM Peak Hour				PM Peak Hour			
		Existing Volume	Simulated Volume	Difference	Less than 15%	Existing Volume	Simulated Volume	Difference	Less than 15%
		Vehicles				Vehicles			
15	**Landover Road & Arena Drive/Lake Arbor Way (Signalized)**								
	NB (Landover Rd)	447	442	-1.09%	Pass	1,383	1,358	-1.79%	Pass
	SB (Landover Rd)	657	654	-0.42%	Pass	2,114	2,149	1.63%	Pass
	EB (Arena Dr)	2,236	2,198	-1.69%	Pass	1,284	1,264	-1.59%	Pass
	WB (Lake Arbor Way)	1,242	1,238	-0.35%	Pass	526	521	-1.00%	Pass
	Overall	4,582	4,532	-1.09%	Pass	5,307	5,291	-0.30%	Pass
16	**Martin Luther King Jr Highway (MLK Jr Hwy) & Ardwick Ardmore Road (Signalized)**								
	EB (Ardwick Ardmore Rd)	583	574	-1.55%	Pass	968	943	-2.54%	Pass
	WB (Ardwick Ardmore Rd)	738	695	-5.83%	Pass	451	426	-5.49%	Pass
	NB (MLK Jr Hwy)	1,571	1,375	-12.50%	Pass	1,429	1,370	-4.13%	Pass
	SB (MLK Jr Hwy)	1,533	1,502	-2.01%	Pass	851	849	-0.19%	Pass
	Overall	4,425	4,146	-6.31%	Pass	3,699	3,589	-2.97%	Pass
17	**Brightseat Road & Ardwick Ardmore Road (TWSC)**								
	EB (Ardwick Ardmore Rd)	508	457	-10.04%	Pass	720	677	-5.94%	Pass
	WB (Ardwick Ardmore Rd)	524	516	-1.58%	Pass	289	281	-2.94%	Pass
	NB (Brightseat Rd)	489	439	-10.29%	Pass	347	318	-8.25%	Pass
	SB (Brightseat Rd)	10	10	-3.50%	Pass	10	10	0.00%	Pass
	Overall	1,531	1,421	-7.18%	Pass	1,366	1,286	-5.85%	Pass
18	**Brightseat Road & Glenarden Parkway (Signalized)**								
	EB (Glenarden Pkwy)	101	100	-1.24%	Pass	189	186	-1.39%	Pass
	WB (Glenarden Pkwy)	109	109	-0.05%	Pass	77	75	-2.11%	Pass
	NB (Brightseat Rd)	507	485	-4.41%	Pass	485	451	-7.04%	Pass
	SB (Brightseat Rd)	367	314	-14.54%	Pass	445	397	-10.73%	Pass
	Overall	1,084	1,007	-7.10%	Pass	1,196	1,110	-7.20%	Pass
19	**Brightseat Road & Evarts Street (Signalized)**								
	EB (Evarts St)	3	3	0.00%	Pass	9	9	0.00%	Pass
	WB (Evarts St)	3	3	-3.33%	Pass	7	7	0.00%	Pass
	NB (Brightseat Rd)	480	453	-5.61%	Pass	556	516	-7.24%	Pass
	SB (Brightseat Rd)	452	399	-11.75%	Pass	563	516	-8.37%	Pass
	Overall	938	858	-8.54%	Pass	1,135	1,048	-7.70%	Pass
20	**Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) (TWSC)**								
	EB (MRA Access Rd)	57	57	-0.88%	Pass	44	43	-2.56%	Pass
	NB (Brightseat Rd)	436	402	-7.86%	Pass	612	549	-10.29%	Pass
	SB (Brightseat Rd)	439	388	-11.70%	Pass	560	514	-8.15%	Pass
	Overall	932	846	-9.24%	Pass	1,216	1,106	-9.03%	Pass

Table D11-2: Approach-based Validation Test Results (continued)

#	Intersection and Approach	AM Peak Hour				PM Peak Hour			
		Existing Volume	Simulated Volume	Difference	Less than 15%	Existing Volume	Simulated Volume	Difference	Less than 15%
		Vehicles				Vehicles			
21	**Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)**								
	EB (Sheriff Rd)	347	342	-1.50%	Pass	644	642	-0.27%	Pass
	WB (Brightseat Rd)	279	231	-17.08%	Fail	461	395	-14.34%	Pass
	NB (Redskins Rd)	321	318	-0.87%	Pass	331	327	-1.17%	Pass
	SB (Brightseat Rd)	515	484	-6.09%	Pass	742	707	-4.68%	Pass
	Overall	1,462	1,375	-5.95%	Pass	2,178	2,072	-4.89%	Pass
22	**Brightseat Road & Arena Drive (Signalized)**								
	EB (Arena Dr)	392	387	-1.29%	Pass	335	330	-1.46%	Pass
	WB (Arena Dr)	589	539	-8.51%	Pass	837	768	-8.20%	Pass
	NB (Brightseat Rd)	363	361	-0.44%	Pass	426	418	-1.91%	Pass
	SB (Brightseat Rd)	371	335	-9.60%	Pass	475	433	-8.82%	Pass
	Overall	1,715	1,623	-5.39%	Pass	2,073	1,950	-5.96%	Pass
23	**Arena Drive & I-95/I-495 Southbound Ramps (Signalized)**								
	EB (Arena Dr)	666	638	-4.17%	Pass	844	803	-4.87%	Pass
	WB (Arena Dr)	580	574	-1.03%	Pass	953	946	-0.79%	Pass
	SB (I-95/I-495 SB Off-Ramp)	353	254	-27.92%	Fail	559	427	-23.61%	Fail
	Overall	1,599	1,467	-8.28%	Pass	2,356	2,175	-7.67%	Pass
24	**Arena Drive & I-95/I-495 Northbound Ramps (Signalized)**								
	EB (Arena Dr)	690	623	-9.66%	Pass	1,028	946	-7.99%	Pass
	WB (Arena Dr)	632	628	-0.62%	Pass	1,007	997	-0.98%	Pass
	NB (I-95/I-495 NB Off-Ramp)	321	312	-2.85%	Pass	338	330	-2.37%	Pass
	Overall	1,643	1,563	-4.85%	Pass	2,373	2,273	-4.21%	Pass

Notes:

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

TWSC = Two-way STOP-Controlled unsignalized intersection

Red cells denote intersections or approaches where simulated versus actual volumes were greater than a 15% difference.

Table D11-3: Validation Test Summary

	Facilities	Percent of Total	Check		Facilities	Percent of Total	Check
	AM Peak Hour				PM Peak Hour		
Number of passing approaches	82	97.6%	Pass		83	98.8%	Pass
	84				84		
Number of passing intersections	24	100.0%	Pass		24	100.0%	Pass
	24				24		
	Volumes	**Percent Difference**	**Check**		**Volumes**	**Percent Difference**	**Check**
	AM Peak Hour				PM Peak Hour		
Simulation approach volume sum	76,398	-3.0%	Pass		81,625	-2.7%	Pass
Actual approach volume sum	74,156				79,454		

D11.2.3.3 Travel Time Comparison

Based on the Federal Highway Administration's (FHWA) *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software*, the Travel Time Comparison validation test compares the simulation travel time to the Existing Condition travel time. If the difference between the two travel times is less than 15 percent, then the model passes the test (FHWA 2004). The same simulation results as the vehicle volume test were used for this test and already accounted for the minimum number of simulation runs to be statistically accurate within plus or minus two percent at the 95th percentile confidence interval.

Two travel time runs were developed to capture the primary anticipated critical vehicle flows for the Build Condition. The first route followed Landover Road through the entire study area (just west of Old Landover Road to just south of Arena Drive). This route represents the critical spine roadway covering the study area. The second travel run was between the Arena Drive Interchange with I-95/I-495 and Sherriff Road west of Brightseat Road. This route represented an alternative route between the Landover site and I-95/I-495. This second route did not cross Landover Road because the traffic light at that intersection would substantially impact the travel times more than the traffic volume depending on the arrival moment. Figure D11-2 shows the two travel time runs.

The routes were driven on January 28th and 29th, 2015, during the peak hour, which was determined through the collection of the turning movement counts (see Section 3.1.3 of the main Landover TIA report). The AM peak hour was between 7:30 AM and 8:30 AM and the PM peak hour was between 5:00 PM and 6:00 PM. Two runs were conducted for both directions for each route and averaged to form a travel time value in minutes.

As a comparison on February 3rd, 2015, Google Maps was accessed during the peak hours and the travel routes were mapped to determine the actual driving time. Google Maps calculates the actual driving time based on many more samples than the two manual driven trips. The Google Maps actual driving times were compared to the manual driving times to ensure the Google Maps driving times were reasonable and more importantly were not too low, thus not taking into account traffic signal delays.

The Google Maps driving times and manual driving times were averaged to form the Existing Condition driving time to compare to the travel time calculated by TransModeler™. According to the results of the validation tests, the TransModeler™ simulations were within 15 percent of the Existing Condition travel times. Table D11-4 contains the travel time validation test summary.

Figure D11-2: Travel Time Runs

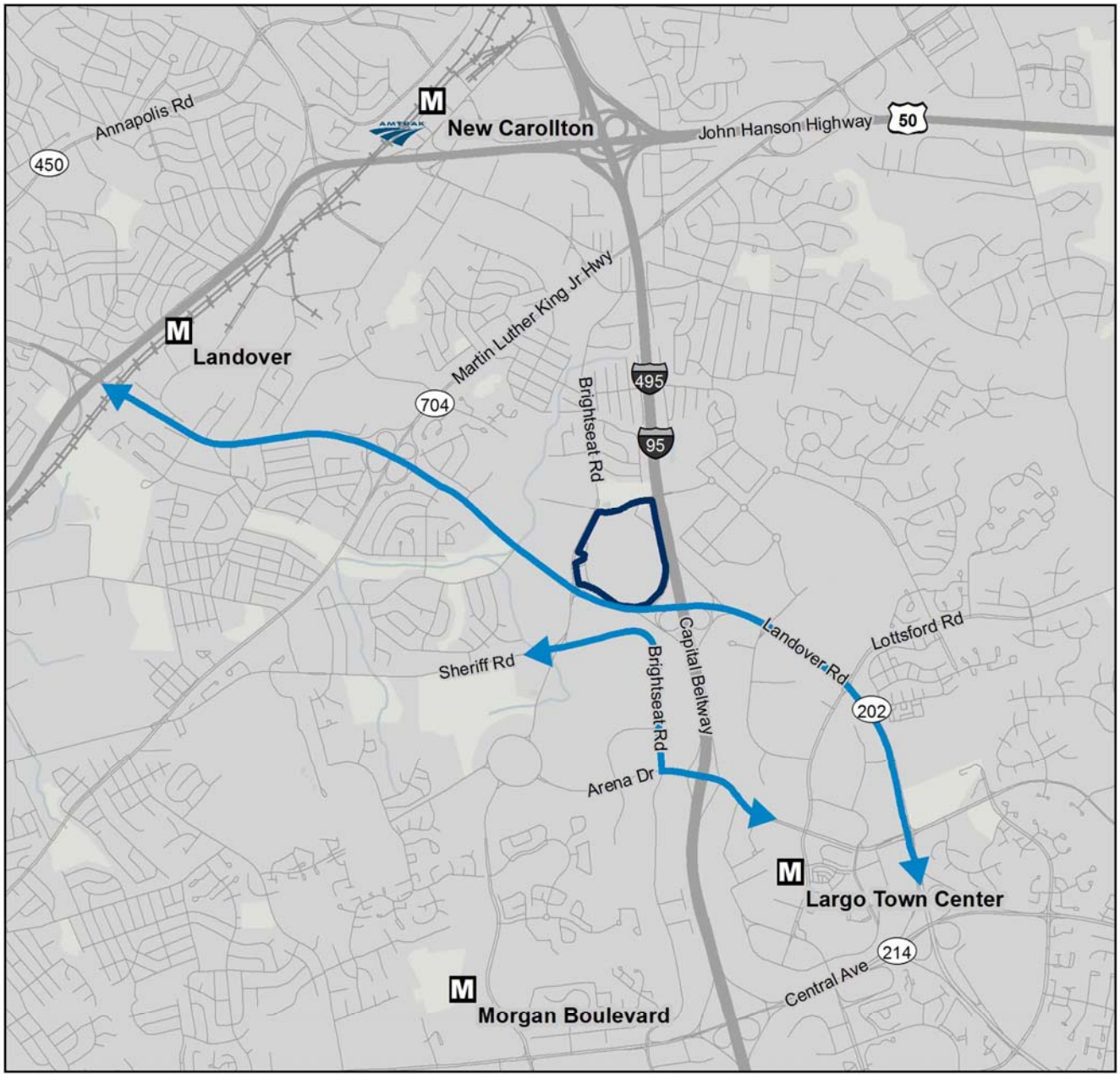

Table D11-4: Travel Time Validation Summary

Travel Runs	Direction	Manual Run [a]	Google-Maps	Trans-Modeler	Difference	Check
		minutes				
AM Peak Hour						
Landover Road (Old Landover Road to Arena Drive)	EB	8.8	9.0	8.8	1.1%	**Pass**
	WB	9.1	9.0	7.9	12.9%	**Pass**
Arena Drive/Brightseat Road (I-95/I-495 Interchange to Sheriff Road)	SB/EB	3.9	4.0	4.3	-9.6%	**Pass**
	WB/NB	3.9	4.0	4.1	-3.8%	**Pass**
PM Peak Hour						
Landover Road (Old Landover Road to Arena Drive)	EB	9.3	10.0	8.7	9.6%	**Pass**
	WB	9.8	9.0	9.4	-0.3%	**Pass**
Arena Drive/Brightseat Road (I-95/I-495 Interchange to Sheriff Road)	SB/EB	3.9	4.0	4.4	-12.1%	**Pass**
	WB/NB	3.9	4.0	4.3	-8.9%	**Pass**

Notes:

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

[a] Represents two travel time runs averaged

D11.2.4 Calibration Process

The original results calculated in the validation process had many more failing checks than presented because TransModeler™ required calibration to achieve the established goals from the FHWA report. Calibration consisted of replacing some of the manual turning movement counts with origin-destination volumes, site-specific adjustments to increase intersection throughput, and adjustment of link speeds.

D11.2.4.1 Volume Conversion to Origin-Destination Pairs

The initial turning movement volumes provided complete network coverage of vehicle volumes; however, TransModeler™ converts those volumes to origin-destination pairs to attempt to closely match the turning movement volumes. This process can replicate the vehicle volumes for each turning movement in a network; however, this network also contains Interstate mainlines and ramps which can reduce the turning movements volumes at intersection approaches representing off-ramps from the Interstate. TransModeler™ tends to develop origin-destination pairs that remain on the Interstate links before creating origin-destination pairs between the Interstate and local roadway network, thus fewer vehicles exit the system than actual occur. The resolution to this issue required creating special origin-destination pairs for all background through traffic using the Interstate. Specifically, the origin-destinations pairs there were created are as follows:

- I-95/I-495 southbound from the northern study area edge to the southern study area edge via the I-95/I-495 mainline
- I-95/I-495 southbound from the northern study area edge to the southern study area edge via the I-95/I-495 collector distributor (see Section D11.2.4.2) for more details regarding this pair)
- I-95/I-495 northbound from the southern study area edge to the northern study area edge via the I-95/I-495 mainline
- I-95/I-495 northbound from the southern study area edge to the northern study areas edge via the I-95/I-495 collector distributor

- Central Avenue (MD 214) northbound I-95/I-495 on-ramp from the southern study area edge to the northern study area edge via the I-95/I-495 mainline
- I-95/I-495 southbound from the northern study area edge to the Central Avenue (MD 214) off-ramp via the I-95/I-495 mainline

Once the origin-destination pairs were in place, the turning movement values representing these newly created origin-destination pair were adjusted to avoid duplication. This adjustment forced TransModeler™ to create origin-destination pairs that all exited the Interstates at the appropriate ramp because the remaining turning movement volumes only represented entering and exiting vehicles along the Interstate.

D11.2.4.2 Site Specific Adjustments

TransModeler™ follows a more conservative approach to unsignalized intersection movements assuming a longer delay for vehicles entering from the minor street approach. Based on the Existing Condition volumes collected, drivers attempting these movements are accepting a lower gap acceptance value than the default TransModeler™ values. Gap acceptance is the minimum gap in seconds between vehicles traveling along the major approach that a driver from the minor street approach is willing to allow before entering the intersection. In lieu of a gap acceptance study, the vehicle headway buffer was reduced to allow vehicles entering from the minor street approaches to more closely follow each other. This change essentially reduces the gap acceptance value and thus increases the vehicle throughput from the minor street approach. This procedure is also limited to a specific intersection approach rather than adjusting a global gap acceptance for all intersections. The vehicle headway buffer was reduced at the Brightseat Road northbound approach to Ardwick Ardmore Road to increase the vehicle throughput.

Field observations noted that vehicles traveling southbound on the I-95/I-495 collector distributor lanes sometimes cross double white solid lines prior to the collector distributor lanes rejoining the I-95/I-495 mainline. This activity occurred because the collector distributor is designed with a lane drop, thus some vehicles in the left lane tend to merge into the right-most lane along the I-95/I-495 mainline. While this move is illegal it was still important to capture because it was allowing the facility to function. A special connection between the collector distributor and mainline was created to allow this move in the simulation. An estimated 3 percent of the vehicles were assigned to make this movement through a special origin-destination pair. Note that for the No-build and Build Conditions, the number of vehicles using this connection was determined through the dynamic trip assignment process.

D11.2.4.3 Adjustment to Link Speeds

The link speeds were adjusted to reduce the travel time along Brightseat Road between Arena Drive and Sheriff Road. The posted speed limit is 30 mph; therefore, the speed was increased by 5 mph to 35 mph resulting in travel times closer to the values determined through an average of the manual driving time and Google Maps driving times.

D11.3 References

Federal Highway Administration (FHWA)

2004 Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software, U.S. Department of Transportation, Federal Highway Administration, Publication No. FHWA-HRT-04-040, McLean, Virginia.

Maryland State Highway Administration (Maryland SHA)

2015 Classification counts (Traffic Data). Available online at: http://shagbhisdadt.mdot.state.md.us/ITMS_Public/default.aspx, accessed on January 8, 2015 and February 14, 2015.

Site Visits

1. Site Visit by Louis Berger on January 28, 2015
2. Site Visit by Louis Berger on January 29, 2015

Appendix D12

TransModeler™ Sample Size Determination Statistics

Federal Bureau of Investigation Headquarters Consolidation

Draft Transportation Impact Assessment

Landover Site Alternative

Prepared by

Louis Berger

for

GSA

October 2015

D12 TransModeler™ Sample Size Determination Statistics

D12.1 Summary of Calibration Process

This appendix contains the statistical Excel sheets used to determine the appropriate number of simulation runs. The use of TransModeler™ involved calibrating a model, ensuring the model runs for the appropriate amount of time, and determining the number of simulation runs to be statistically within a plus or minus 2 percent error. Appendix D11 contains the model calibration process. Running the model included a seeding time (time for vehicles to completely travel the network) plus a 60-minute recording time. Based on the distance from the farthest points on the network, a 10-minute seed time was applied.

The minimum number of simulation runs was calculated by running the simulation for 25 runs. Based on the results of the 25 runs, the standard deviation was calculated using the vehicle hours of travel (VHT) metric. VHT provides a good indication of vehicle delays by requiring more simulations given facility operation and queuing issues. Using the calculated standard deviation, the number of simulations required was calculated to be within plus or minus 2 percent at the 95th percentile confidence level.

D12.2 Glossary of Sheet Terms

Standard Deviation – a measure that is used to quantify the amount of variation among the data values

Confidence Interval (C.I.) – an interval estimate of a parameter

Confidence Level – a range of values likely to contain the parameter of interest

Percent Error – the range of values above and below the sample statistic (or margin of error)

Number of Samples – minimum number of simulation runs required to be within plus or minus 5 percent error at 95th percentile

Mean – average vehicle hours of travel (VHT)

Required Sample Size Existing Condition AM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	7.8114
Number of Samples	6
95% Confidence Interval	20.176
Percent Error	**1.9%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	7.8114
Number of Samples	20
Mean	1039.63
95% Confidence Interval	8.5009

Required Sample Size Existing Condition PM

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	12.0715
Number of Samples	8
95% Confidence Interval	24.2524
Percent Error	**2.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	12.0715
Number of Samples	20
Mean	1228.09
95% Confidence Interval	13.137

Required Sample Size for 7 Lanes West Entry Control Facility (ECF) and 1 Lane at North ECF

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	44.2102
Number of Samples	13
95% Confidence Interval	62.7807
Percent Error	**2.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	44.2102
Number of Samples	25
Mean	3177.1
95% Confidence Interval	42.2817

Required Sample Size for 8 Lanes West ECF and 1 Lane at North ECF

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	34.1657
Number of Samples	10
95% Confidence Interval	58.0185
Percent Error	**1.9%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	34.1657
Number of Samples	25
Mean	3099.68
95% Confidence Interval	32.6754

Required Sample Size for 9 Lanes at West ECF and 1 Lane at North ECF

USE TO FIND REQUIRED SAMPLE SIZE	
Desired Confidence Level	95%
Sample Standard Deviation	46.9424
Number of Samples	15
95% Confidence Interval	60.8343
Percent Error	**2.0%**

USE TO TEST C.I. OF SAMPLES	
Desired Confidence Level	95%
Sample Standard Deviation	46.9424
Number of Samples	25
Mean	3073.97
95% Confidence Interval	44.8948